UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL
INSTITUTO DE FILOSOFIA E CIÊNCIAS HUMANAS
PROGRAMA DE PÓS-GRADUAÇÃO EM FILOSOFIA

GIOVANNI ROLLA

DISJUNTIVITE:
CONHECIMENTO, FENOMENOLOGIA E RACIONALIDADE

PORTO ALEGRE, AGOSTO DE 2017

Giovanni Rolla

Disjuntivite:
Conhecimento, Fenomenologia e Racionalidade

Tese apresentada ao programa de Pós-graduação em Filosofia da Universidade Federal do Rio Grande do Sul como requisito parcial para a obtenção do grau de Doutor em Filosofia.

Orientador: Prof. Dr. Eros Moreira de Carvalho
Coorientador: Prof. Dr. Paulo Francisco Estrella Faria

CIP - Catalogação na Publicação

Rolla, Giovanni
Disjuntivite: Conhecimento, Fenomenologia e Racionalidade / Giovanni Rolla. -- 2017.
134 f.

Orientador: Eros Moreira de Carvalho.
Coorientador: Paulo Francisco Estrella Faria.

Tese (Doutorado) -- Universidade Federal do Rio Grande do Sul, Instituto de Filosofia e Ciências Humanas, Programa de Pós-Graduação em Filosofia, Porto Alegre, BR-RS, 2017.

1. Ceticismo. 2. Disjuntivismo Epistemológico. 3. Disjuntivismo Fenomenológico. 4. Enativismo Radical. 5. Racionalidade Corporificada. I. de Carvalho, Eros Moreira, orient. II. Faria, Paulo Francisco Estrella, coorient. III. Título.

Elaborada pelo Sistema de Geração Automática de Ficha Catalográfica da UFRGS com os dados fornecidos pelo(a) autor(a).

Para Ana e Jorge

Resumo

O presente trabalho visa motivar e defender o disjuntivismo epistemológico, a tese de que a percepção é estado factivo e racionalmente fundado. Essa variação de disjuntivismo é apresentada como uma dissolução do paradoxo cético da subdeterminação. Diante do problema cético do sonho, o disjuntivismo epistemológico é tomado conjuntamente com uma concepção enactivista da percepção, cuja tese central é que estados perceptuais são constituídos pelas ações do agente no ambiente. A conjunção dessas duas teses promove uma concepção corporificada da racionalidade, segundo a qual estados percpetuais racionalmente fundados são obtidos pelo exercício de habilidades do indivíduo no ambiente. Essa tese é ameaçada pela intuição supostamente plausível de que indivíduos em cenários céticos poderiam ser racionais, ainda que não possuíssem meios corpóreos para interação com seu em torno. Argumenta-se contra essa intuição pela crítica à maneira como cenários céticos são concebidos. Por fim, aplica-se o enactivismo radical ao autoconhecimento, promovendo um meio termo entre um modelo perceptual de autoconhecimento e um modelo racionalista.

Palavras-chave: ceticismo; disjuntivismo epistemológico; disjuntivismo fenomenológico, enativismo radical; cognição corporificada; racionalidade corporificada; auto-conhecimento

Abstract

This work is intended to motivate and defend epistemological disjunctivism, the view that perception is a factive and rationally grounded state. This version of disjunctivism is presented as a dissolution of the underdetermination skeptical paradox. Facing the dream skeptical problem, epistemological disjunctivism is taken in conjunction with an enactive conception of perception, whose core thesis is that perceptual states are constituted by one's actions in the environment. The conjunction of these two theses promotes an embodied notion of rationality, according to which rationally grounded perceptual states are achieved by the exercise of one's abilities in the environment. That view is threatened by the apparently plausible intuition that individuals in skeptical scenarios could be rational even if they lacked the bodily means to interact with their surroundings. This intuition is defeated by a critique to the way skeptical scenarios are conceived. Lastly, radical enactivism is applied to self-knowledge, attaining a middle ground between the perceptual and the rationalist models of self-knowledge.

Key-words: skepticism; epistemological disjunctivism; phenomenological disjunctivism; radical enactivism; embodied cognition; embodied rationality; self-knowledge.

Contents

Agradecimentos 11
Preface 12
Introdução 14
1. Skeptical Arguments as Paradoxes 18
Abstract 18
1.1. What can we learn with skepticism? 18
1.2. Underdetermination 20
1.3. First attempts to answer the underdetermination skeptical argument 22
1.4. Epistemological Disjunctivism, phase I 26
1.5. Epistemological Disjunctivism, phase II 30
1.6. Dr. Disjunctivist or: How I Learned to Stop Worrying and Love Factivity 32
1.7. Disjunctivism, knowing-that and conceptualism 34
1.8. Concluding Remarks 38
2. Epistemic Immodesty and Embodied Rationality 39
Abstract 39
2.1. Favoring and Discriminating Epistemic Grounds 39
2.2. Dream Skepticism and Phenomenological Conjunctivism 42
2.3. Enactivism and Phenomenological Disjunctivism 46
2.4. Enactivism and Idealism? 53
2.5. Enactivism as an Anti-Skeptical Thesis 55
2.6. Embodied Rationality 56
2.7. Epistemic Immodesty 61
2.8. Concluding Remarks 64
3. Contentless Basic Minds and Perceptual Knowledge 66
Abstract 66
3.1. Radically Embodied Cognition 66
3.2. Contentless Knowledge? 69
3.3. Perceptual Knowledge-how/wh and Perceptual Knowledge-that 70
3.4. The Normative Constraints on Perceptual Knowledge 74
3.5. From Perceiving to Perceiving That 79

3.6. Against tradition? 84
3.7. Concluding Remarks 86
4. On Envatment 88
Abstract 88
4.1. A Transformative Conception of Rationality 88
4.2. On Brains in Bodies and Brains in Vats 91
4.3. Cases of *Unvatment* 93
4.4. Hallucinations, Illusions and Ascriptions of Rationality 95
4.5. Concluding Remarks 103
5. Radical Enactivism and Self-Knowledge 105
Abstract 105
5.1. Know-how and Abilities 105
5.2. Radical Enactivism and the Emergence of Rationality 108
5.3. Shoemaker Against the Perceptual Models 110
5.5. Know-how and Self-knowledge 116
5.6. Other Minds 120
5.7. Concluding Remarks 122
Conclusão 124
Bibliography 127

Agradecimentos

A realização desta tese apenas foi possível com o inestimável apoio de familiares, amigos e colegas que me acompanharam não apenas nos momentos de glórias e méritos, mas também em tempos de imensas dificuldades. Em especial, eu agradeço: a Hingo Weber, meu primeiro professor de Filosofia, por me incentivar a seguir esta carreira; a Sandra e a Eliza, por toda ajuda prestada junto ao nosso departamento; aos colegas dos grupos de pesquisa que discutiram versões preliminares de partes deste trabalho e me ofereceram valiosas observações; aos pareceristas anônimos que comentaram as versões publicadas destes capítulos; aos membros da banca de qualificação, que comentaram uma versão preliminar desta tese: a Jônadas, pelas oposições cavelliana e heideggeriana (às quais ainda resisto... mas menos enfaticamente!), e a André, pelas sugestões e críticas que melhoraram profundamente este trabalho; ao meu orientador Paulo, um exemplo máximo de vigor intelectual, em quem me inspiro para moldar meu caráter acadêmico e cuja leitura atenta ajudou-me a corrigir incontáveis erros; ao meu orientador Eros, pelo amplo conhecimento e pela infalível e luminosa disposição em partilhá-lo, por me ajudar a delinear os rumos desta pesquisa e a encontrar a minha voz na Filosofia; a Chico, Tita e Daniel, por sempre estarem à disposição e por entenderem (e perdoarem) meus longos períodos de ausência, e sobretudo pela companhia nos spritz, Jägermeister e gin tônica (e nas subsequentes ressacas); a Fernando, pela infindável amizade e por toda ajuda prestada mesmo quando distante; a Nykolas, pelos onze anos de parceria e pela companhia no pugilato; a Eduardo, pela amizade e pelo incentivo; a Jonatan, pelas produtivas discussões filosóficas, pelas aulas que ministramos juntos e pela companhia em momentos de necessidade; a Max, a criatura trevosa, o cachorro que me alegra nas tardes de bloqueio criativo; a minha amada Martina, porque nossos caminhos voltaram a ser um só, e porque sua presença e dedicação mantêm-me sempre motivado a ser uma pessoa melhor. Por fim, eu agradeço aos meus pais, Ana e Jorge, que me ofereceram apoio incondicional, e a eles eu humildemente dedico este trabalho.

Preface

When studying Philosophy, one quickly sees that no philosophical solution is completely immune to criticism. That is not to say that philosophical problems are insoluble, only that philosophical solutions are hardly unquestionable.

This realization led me to believe that it is more important to make my own mistakes than to repeat the mistakes of others. Clearly, however, an idiosyncratic but vulgar mistake is of little to no value – I then chose a more whimsical path: here I have tried to properly buttress and defend views that may seem eccentric to traditional epistemology and philosophy of mind, but, in doing so, I also tried to remain faithful to common sense.

This work represents the struggle to find my own voice in Philosophy.

On the origin of the chapters

I can only hope that this work is not excessively disjointed – as its title may suggest – despite the fact that most of these chapters were written and published in a different order:

Previous versions of the first chapter, *Skeptical Arguments as Paradoxes*, were presented at the VII congress of the Sociedad Española de Filosofía Analítica in 2013 and at the XVI ANPOF National Meeting in 2014. I am especially thankful to Eros de Carvalho, Flávio Williges, John Broome and Livia Mara Guimarães for their insightful remarks.

Parts of the second chapter, *Epistemic Immodesty and Embodied Rationality*, were presented at the seminar on Epistemology and Philosophy of Mind at UFRGS, at the European Epistemology Network Meeting in 2016 and at the International Rationality Summer Institute in 2016. I am thankful to the audiences for their remarks, especially Eros de Carvalho, Jônadas Techio, Rafael Vogelmann, Regina Fabry and Eva Schmidt. I am also thankful for an anonymous referee for *Manuscrito*, the journal in which a previous version of this chapter was published (Rolla, 2016a).

A substantial part of the third chapter, *Contentless Basic Mind and Perceptual Knowledge*, was presented at the III Colóquio de Filosofia e Artes Marciais, in 2016. I am thankful to Alexandre Meyer Luz for his commentaries and suggestions. With quite a few changes, this paper is forthcoming in *Filosofia Unisinos*.

The main arguments of the fourth chapter, *On Envatment*, can be found in Rolla (2016b), and it was originally presented at the Salzburg Conference for Young Analytic Philosophers in 2015. Since then I have made significant changes on this paper. I am very thankful for the remarks made by Jônadas Techio, Eros de Carvalho and an anonymous referee for the *Kriterion*.

The fifth chapter, *Radical Enactivism and Self-Knowledge* is forthcoming in *Kriterion*.

Introdução

Eu cunhei o termo quase técnico ‘disjuntivite’ de modo humoroso para me referir a um comprometimento crescente com o disjuntivismo (de modo semelhante, acredito, ao uso que Vogel fez de ‘subjuntivite’ alguns anos antes comentando as análises externalistas de conhecimento). A disjuntivite é uma condição que se desenvolve da seguinte maneira: em um belo dia, um indivíduo perfeitamente são torna-se persuadido pela alegação do disjuntivista epistemológico de que um sujeito ou bem está percebendo seu em torno, de tal modo que ele adquire conhecimento perceptual racionalmente fundado, ou bem está em um caso desviante, como sonhando ou alucinando. O disjuntivismo epistemológico, portanto, nega a existência de um fator-comum epistêmico entre casos de conhecimento perceptual e estados desviantes. Ainda que bastante controversial, essa é uma tese bem-vinda, pois ela oferece uma respostra simples e persuasiva ao problema cético da subdeterminação. Esse problema surge assumindo-se que um estado perceptual e um estado desviante possuem as mesmas propriedades epistêmicas – portanto, a crença resultante de um estado perceptual não é justificada diante da alternativa incompatível de que se poderia estar em um estado de sonho, alucinação, etc. Essa variedade de disjuntivismo, concebido como uma estratégia de revisão das nossas pré-concepções epistemológicas, oferece uma rejeição plausível da premissa nesse argumento cético e, portanto, barra a sua conclusão. (Um pouco de história pessoal: eu estava tratando desse problema cético desde o final da minha dissertação de mestrado em 2013, e descobri por essa época que o disjuntivismo poderia motivar uma dissolução desse problema. *Apenas então* eu descobri que Duncan Pritchard havia escrito sobre esse tema de uma maneira muito mais precisa, elegante e compreensiva. Quando nós conversamos, eu contei a ele minhas ideias – ao que ele respondeu que *great minds think alike*. Eu certamente nunca havia recebido um elogio dessa magnitude. Obrigado, Duncan, mas eu discordo de você em muito do que segue – certamente minha mente não é tão grandiosa quanto a sua!)

De volta ao histórico da patologia benigna, tudo vai bem até que se descobre que maior parte das versões de disjuntivismo epistemológico concede demais ao ceticismo por ser neutra quanto a existência de uma fenomenologia comum entre o indivíduo que percebe seu ambiente e sua cotnraparte em um cenário cético, como o cenário do sonho ou um cenário radical. Ademais, maioria das versões não se posiciona sobre se um cérebro desencorpado em uma cuba poderia ser tão racional quanto um sujeito normal em um ambiente atual (o que é, a

meu ver, uma aceitação tácita de uma concepção aditiva da racionalidade segundo a qual os inputs perceptuais apenas oferecem as informações sobre as quais a racionalidade opera, podendo serem simulados como que no vácuo e sem perda de racionalidade para a articulação dos outputs comportamentais). Esses problemas tornam-se uma fonte de inquietude intelectual, e, como reação, um sujeito desenvolve um disjuntivismo não apenas sobre conhecimento perceptual, mas também sobre fenomenologia e sobre a racionalidade. *Isso foi longe demais*, seus colegas dizem como que em uma intervenção, *pare com esse disjuntivismo!*

Agora, eu disse que cunhei o termo de um modo *humoroso* porque eu pensei que não seria vulnerável a tal condição. Eu inocentemente pensei que estava seguro com o disjuntivismo epistemológico – mas ele se tornou apenas uma porta de entrada dialética a variantes mais extremas. Então isso deve ser aviso aos epistemológos com intuições anti-céticas: vocês não vão, ou melhor, *vocês não podem* parar no disjuntivismo epistemológico (eu assim vou argumentar no segundo capítulo).

Esta tese é estruturada da seguinte maneira: no primeiro capítulo, *Skeptical Arguments as Paradoxes*, eu argumento que o disjuntivismo epistemológico é a melhor solução disponível ao paradoxo cético da subdeterminação. Para isso, eu apresento como se deve entender problemas céticos e quais as posturas que podemos assumir diante desse tipo de problema. Eu apresento o disjuntivismo e as suas motivações, bem como uma solução rival ao problema da subdeterminação que eu chamei de meramente pragmática. É importante explicitar que a solução meramente pragmática não pretende mostrar que casos de percepção genuína e casos de engano massivo são epistemicamente diferentes, mas que, dada a nossa condição de agentes com compromissos práticos, é *pragmaticamente* melhor tratá-las como diferentes. A conjunção que eu ofereço entre disjuntivismo epistemológico e enactivismo (no segundo capítulo), portanto, embora admita uma dimensão prática na constituição do conhecimento perceptual, é diferente da solução meramente pragmática.

No segundo capítulo, *Epistemic Immodesty and Embodied Rationality*, eu argumento que o problema cético do sonho é um problema moderado, por duas razões relacionadas: ele não atinge todas as alegações possíveis de conhecimento, e aquelas alegações que estão fora do escopo da dúvida cética do sonho permitem motivá-lo. Dessa maneira, o problema cético do

sonho difere de problemas postos por hipóteses céticas radicais, de tal modo que um disjuntivismo epistemológico tem de oferecer meios para discriminar percepção genuína de sonho. Eu motivo a possibilidade dessa discriminação – o que eu chamo de disjuntivismo fenomenológico, através do enactivismo, a tese segundo a qual o conhecimento perceptual é obtido pelo exercício de habilidades sensório-motoras. Ao oferecer uma conjunção do disjuntivismo epistemológico e do enactivismo, temos em mãos uma dissolução do problema da *falta de modéstia epistêmica* – a saber, a consequência aparentemente inaceitável do disjuntivismo de que podemos saber, de modo racionalmente fundado, que não estamos em cenários céticos.

Em grande medida, o esforço deste trabalho é oferecer uma concepção de conhecimento perceptual e de capacidades racionais que evita o mito do dado. Os conceitualistas clássicos pretenderam oferecer a conexão epistêmica entre mente e mundo ao projetar os conceitos na realidade ela mesma – como diz o slogan, *a realidade vem com legendas*. Eu procurei percorrer o caminho contrário, ainda com o mesmo desiderato: oferecer uma interpretação do conhecimento perceptual e da racionalidade de acordo com as nossas habilidades sensório-motoras. Nessa concepção que eu proponho, podemos dizer seguindo Gibson que *a realidade vem com possibilidades de ação*. Assim se procura evitar o mito do dado – porque a realidade não é dada independentemente da nossa contribuição subjetiva ou intersubjetiva, mas sim mediada pelas habilidades sensório-motoras que nos permitem navegar pelo ambiente. Eu exploro que tipo de concepções de conhecimento e de racionalidade são essas no terceiro capítulo, *Contentless Basic Minds*, em que argumento que o conhecimento prático (*saber onde, quando* e *como*) que constitui nossa interação básica com a realidade pode converter-se em conhecimento perceptual proposicional porque está restrito pelas mesmas condições de normatividade.

No quarto capítulo, *On Envatment*, eu avalio uma consequência dos capítulos anteriores, a saber, que cérebros encubados não seriam, e não poderiam ser, racionais do mesmo modo que nós porque eles não possuiriam um corpo para agir e um ambiente para prosperar. Meu argumento é que isso não é tão problemático quanto filósofos tradicionais podem tender a pensar, porque a própria ideia de atribuição de racionalidade *em casos de engano massivo* é parasitária de atribuições de racionalidade *em casos reais de engano*, especificamente, de ilusão e alucinação. Em casos reais de engano, se um sujeito erra incorrigivelmente, não

estamos dispostos a atribuir-lhe racionalidade. Por que haveria de ser diferente nos cenários céticos radicais? Cenários céticos radicais parecem promover uma avaliação diferente porque, ao mesmo tempo em que se pretende que sejam casos analogos a casos normais, excepcionais apenas na dimensão do erro, rompe-se com a analogia na medida em que *não é possível evitar o erro*. Cenários céticos radicais são o que eu chamo de *extrapolações indevidas* e não devem servir de exame sobre as nossas intuições.

Finalmente, no quinto capítulo, *Radical Enactivism and Self-Knowledge* eu aplico o enactivismo radical ao autoconhecimento, mostrando como o autoconhecimento pode ser amplamente concebido de acordo com um modelo perceptual, em que seus "objetos" intencionais são percebidos de modo análogo aos "objetos" da percepção, sem que esse modelo deixe de respeitar a intuição de que os constituintes intencionais do autoconhecimento são internos ao próprio ato de obter autoconhecimento. A imagem resultante é de que autoconhecimento orienta ações e é orientado por ações. (Como o leitor atento deve ter notado, o subtítulo deste trabalho carece de 'autoconhecimento' ao fim, porque eu pensei que quatro itens era demais e optei pela clássica tríade).

Eu hoje aceito completamente a disjuntivite como a minha condição filosófica, e, com sorte, alguns dos meus leitores serão persuadidos a fazer o mesmo.

1. Skeptical Arguments as Paradoxes

Abstract

In this chapter, I will present my take on skeptical arguments and apply it to the underdetermination skeptical argument. I then present a version of epistemological disjunctivism as the best available option to block the consequence of this argument.

1.1. What can we learn with skepticism?

Skeptical arguments supposedly undermine our putative knowledge (and other positive epistemic statuses, such as justification and entitlement). The idea upon which this work rests is that there is an underlying truth to skepticism – but this needs some unpacking. Initially we can distinguish three ways of identifying the truth of a skeptical argument. The first way consists in accepting the skeptical conclusion – for instance, that we have no knowledge whatsoever about the world around us or that we are not entitled to our beliefs. On this view, we would be compelled to reject our pre-philosophical thoughts regarding our everyday knowledge. But this is too strong. Someone who takes this path can find a middle ground between skepticism and common-sense. One way to do so is to distinguish the conditions under which we can *appropriately claim to know* something from the conditions under which it is *true to claim* that we know. Here is Stroud on the matter:

> There are two apparently distinct questions that can be asked about what someone says. We can ask whether it is true, or we can ask whether it was appropriately or reasonably said. The two questions do not always get the same answer; certainly it is possible for them to differ. All the conditions sufficient for appropriate or reasonable utterance can be fulfilled when what is said is not literally true. The distinction even more obviously can be made in the other direction; there are countless things that are now true which no one is now in a position reasonably to assert or believe. (Stroud, 1984, pp. 57-58).

That distinction explains how we can properly claim knowledge in everyday situations, despite our lack of a positive epistemic status. However, this maneuver saves only the appropriateness of our knowledge claims, not our knowledge – and it is, as Pritchard (2012) puts it, committed to a profound form of epistemological revisionism.

Another way of identifying the truth of skepticism consists also in accepting the skeptical conclusion, and then going a step further: answering the problem posed by a skeptical argument by adjusting the epistemic concepts it trades upon. This would force us to develop a philosophical theory to properly *solve* the skeptical problem, and this kind of theory has as a consequence some sort of revision of what we usually or pre-philosophically take for granted, say, of what it is to know a person or an object, what an object is, or how misleading are our everyday pretensions to know. One such example is Berkeley's *kamikaze* attempt at saving the world by trying to destroy it, and much of the talk about sense data takes the same path. Sense data theorists assume that the only kinds of things we are *actually* in contact with are the immediate data of experience (although some room has to be made to logical constants and concepts, but these are not of course objects of sensation), since these are immune to skeptical doubt – one would, then, rebuild the lost world by articulating these data. I shall not return to this kind of strategy, for I take it for granted that it concedes too much to the skeptic and is also committed to revisionism, maybe to a lesser degree than the previous strategy.

Finally, the other possible way to identify the truth of skepticism is to reject the skeptical conclusion from the beginning, for something so blatantly incompatible with our epistemic practices *must be false*, and we have only to explain exactly *why*. As Pollock and Cruz put it, "a typical skeptical argument is best viewed as a *reductio ad absurdum* of its premises, rather than a proof of its conclusion" (1999, p. 7). That is so because skeptical arguments have extremely counterintuitive conclusions, something we are fiercely unwilling to accept, despite the soundness they appear to exhibit. According to this stance, the conclusions in skeptical arguments follow from *prima facie* acceptable premises, thus characterizing skeptical arguments as *paradoxes*. In order to solve a skeptical paradox, we find ourselves in the delicate position of trying to find which premise we should reject despite its apparent plausibility. The upshot is that we discover something relevant about ourselves; namely, which intuition regarding epistemic concepts must, on a closer examination, be rejected if we want to avoid skeptical conclusions – and that is the truth of skepticism. Although this stance does imply that skepticism, once it is properly articulated as an argument to undermine our positive epistemic statuses, has a mere *instrumental* value in the elucidation of our epistemic condition, it is not less valuable as an inquiry than other forms of philosophical investigations.

In the remainder of this work, I am going to systematically explore that latter way of dealing with skepticism, thus trying to better understand our underlying intuitions about our epistemic relations with the world instead of offering a revisionist philosophical theory that aims to answer or solve the skeptical problem[1]. At the risk of being overly repetitive, I must emphasize that I am not going to provide an argument, transcendental and whatnot, against a skeptical conclusion; I am not going to provide a *proof* that we have knowledge. On the contrary, I take for granted that we have plenty of everyday knowledge and that there is something wrong with skeptical arguments, and I will proceed by attempting to identify the misleading premise of a particular skeptical argument. Before doing that, I want to advertise something that will only be clear in the next sections: what we gain by taking this route is the understanding that perception is both factive and a form of rationally grounded knowledge of our environment.

1.2. Underdetermination

Since at least Brueckner (1994), the debate on the fundamental structure of skeptical arguments has focused on the logical relation between two principles, the infamous *closure principle*, which has been in the spotlight since at least Drestke's groundbreaking paper on epistemic operators (1970), and the new contender, the *underdetermination principle*. A basic version of the latter could be stated as follows:

If S has a perceptual state indicating p which is compatible with an alternative proposition q, which S knows to imply $\neg p$, then S is not justified in believing that p.

Now, there is much going on here. First, note that this principle is quite compelling at an intuitive level. To take an ordinary example: if I see, from a suitable distance, a friend of mine who I know that has an identical twin (let us suppose they dress alike and have the same haircut, etc.), then I am not justified in believing that it is my friend instead of his brother. Secondly, note that this principle is about perceptual experience (although it has a living relative in the philosophy of science, see Stanford 2006). Our inquiry will be focused,

[1] That is not to say that one cannot sometimes find oneself in an intermediary position between the last two alternatives sketched above. I find the idea of offering that kind of philosophical theory to be an ever present temptation in doing philosophy and this is something I intend to refrain from doing.

therefore, on perceptual knowledge, and not much of what will be said below can be directly adapted to testimonial, inferential knowledge or scientific knowledge, but in principle that could be done as long as these are taken to be derivatives of perceptual knowledge. Thirdly, this principle mentions not only *knowledge*, but also *beliefs* and *justification*. This is reasonable, since it is widely accepted that knowledge entails belief – even if one subscribes to an epistemology that does not *analyze* the concept of knowledge into other concepts, such as *belief* and *justification* (Williamson 2000). Now, the relation between knowledge and justification is not as consensual as that entailment. This is so because there is very little agreement on what justification *is*, although the term has been claimed by internalists about knowledge (Plantinga 1990), usually meaning one's rational grounds to believe. We will take a closer look in the next chapter on how we should understand the phrase 'rational grounds', but one plausible candidate is the sort of things one can recognize as the bases of one's perceptual beliefs, such as evidences, reasons and facts. More importantly for the time being is that, even if one rejects internalism about knowledge, thereby accepting that there is knowledge without rational grounds, the underdetermination principle still remains plausible. This is so because most externalists, if not all of them, would not say that *there is no rationally grounded knowledge*, only that sometimes one can know without a rational ground. That would be the case of the chicken sexers of philosophical lore, for instance. Supposedly, they can reliably discriminate the birds' sex without basing this knowledge on rational grounds – however, we can imagine someone that achieves the same rate of success by interpreting a blood exam, for instance. To make things clearer, therefore, I am following Pritchard (2012, 2016) in expressing it as follows:

If S has a perceptual state indicating p which is compatible with an alternative proposition q, which S knows to imply $\neg p$, then S's perceptual state does not constitute the rational grounds to believe that p.

This new version of the principle concerns our perceptual states and the rational grounds they supposedly confer to our perceptual beliefs, so an appeal to externalism about knowledge would not impact the argument based upon it, namely, the underdetermination skeptical argument. Henceforth, I am going to focus on this principle instead of the closure alternatives, for as Pritchard (2016) argues, the underdetermination principle is logically less demanding

than its closure variant and, therefore, motivates a stronger skeptical argument[2]. In the next chapter, we will take a closer look at the dream skeptical argument based on a version of the closure principle, but for now, let us focus on the underdetermination argument, which we can formulate as follows (where 'SH' stands for a radical skeptical hypothesis, such as that one might be a brain in a vat):

(U1) If S has a perceptual state indicating *p* which is compatible with SH, which S knows to imply ¬*p*, then S's perceptual state does not constitute the rational grounds to believe that *p*.

(U2) S's perceptual state is compatible with SH.

Therefore, (U3) S's perceptual state does not constitute the rational grounds to believe that *p*.

(U4) Rationally grounded knowledge that *p* implies rational grounds to believe that *p*.

Therefore, (SC) S does not have rationally grounded knowledge that *p*.

1.3. First attempts to answer the underdetermination skeptical argument

The skeptical conclusion SC above challenges our rationally grounded knowledge of mundane propositions such as that there is a cup of coffee to my right, which I apparently perceive to be the case. Before moving on to epistemological disjunctivism and how it enables us to block SC, I want to consider some alternatives.

One might try to block the skeptical conclusion by rejecting the underdetermination principle itself, which is instantiated in U1. This would be tricky, however, for epistemic principles are intended to capture our epistemic procedures – that is not to say that they are necessarily true or infallibly known, but it does mean that any attempt to reject an epistemic principle may end up as a form of epistemological revisionism. One could, instead, claim that such a principle is

[2] The closure principle which is analogous to the underdetermination principle considered above is: if S rationally knows that *p* and competently deduces *q* from *p*, forming a belief in *q* and retaining the rationally grounded knowledge that *p*, then S rationally knows that *q*. Using a simplified version of this principle and a simplified version of the contrapositive of the underdetermination principle, Pritchard (2016, 46-7) proves that closure is stronger than underdetermination because, given closure, if S has rationally grounded knowledge that *p*, then S has rationally grounded knowledge that S is not in a skeptical scenario. Via underdetermination, however, all one can show is that, if S rationally knows that *p*, then S has rational grounds to believe S is not in a skeptical scenario. This is a weaker conclusion, and it can be derived from the conclusion of the former argument, assuming that rationally grounded knowledge implies having the rational grounds to believe.

not true to our practices and attempt to modify it. In this case, one could claim that the problem is not exactly with the principle itself, but with the use it makes of a radical skeptical hypothesis. After all, U1 says that one knows that SH implies ¬*p*. By contraposition, it says that, for any everyday proposition *p*, one knows that *p* implies ¬SH. But this is clearly not the case, as most people seldom *conceive* of skeptical possibilities, let alone consider the logical relation between them and the propositions they seem to know. Additionally, it is not clear that the proposition that there is a cup of coffee to my right is straightforwardly incompatible with the possibility that I am a brain in a vat. For it is clearly possible that I am a brain in a vat *and* there is a cup of coffee to my right – let us say the evil scientist that is manipulating the proximal stimuli in my brain is having coffee in a mug to my right. One could run the same kind of argument for *any* perceived state of affairs. This last objection hinges upon the idea that we do not, and cannot, have an extensive list of propositions entailed by a radical skeptical scenario, and so we cannot know in advance whether a given perceived proposition entails the denial of a skeptical scenario[3].

Both objections can be countered, however, by adding a diachronic clause to the principle: even if one does not know whether a given *p* implies ¬SH, one *could come to know that with a moment of attention*. So, for instance, the relevant skeptical possibility aimed at my putative knowledge that there is a cup of coffee to my right is not that I am a brain in a vat with a cup of coffee to my right, but that I am a brain in a vat with nothing to my right, and even if there was a cup of coffee to my right, my perceptual state would not be epistemically connected with it. Moreover, the fact that some people have never heard of skeptical hypotheses is not sufficient to reject the underdetermination principle, for we are idealizing an individual who is sufficiently informed about a relevant radical skeptical possibility and her actual perceptual state. Such a person *could come to know* that any perceived proposition implies ¬SH. Importantly, however, by modifying the principle in this way, the skeptical argument is not challenged, so we still cannot avoid the skeptical conclusion.

[3] Here and in the arguments that follow, I am using 'state of affairs' and 'proposition' as interchangeable, which warrants the use of 'perceiving a proposition'. Strictly speaking, of course, propositions are causally inert, so they cannot be the perceived. When I write, however, that a subject perceives a proposition, I mean the act by a subject of perceiving that p – a phrase that is far from being unusual. I am focusing, therefore, on propositional perceptual knowledge, or perceptual knowledge-that.

Another way to block the consequence would be to claim that, even if one's perceptual state does not offer the rational grounds for one's perceptual belief, one still can achieve a rationally grounded belief that *p*, but these rational grounds have other sources than the ongoing perceptual state. This strategy would accept *all the premises* of the argument, but deny the conclusion because it would take that argument to be enthymematic, and the fifth premise, which would be false on this view, would be something like this:

(U5) S's rational grounds to believe that *p*, even when the belief that *p* is perceptually acquired, are not essentially derived of S's perceptual state that *p*.

Wright's (2004) take on entitlement might offer a way to explain how a perceptual belief can acquire its rational grounds regardless of the perceptual state it is based on. According to Wright's original idea, we are *entitled to act* as if certain propositions are true, such as that we are not envatted brains, even if we lack the grounds to assert their truth, for otherwise we would be forced to withhold our epistemic practices and this would be, if not straightforwardly impossible, at the very least unacceptable. Therefore, such entitlement is *rational*, because it enables us to perform our epistemic practices. Note, however, that the entitlement at play here concerns the *denials of radical skeptical hypotheses*, so that, if successful, it addresses a traditional Cartesian argument, as Wright rightfully notices, which is a variation of the closure based skeptical argument. The entitlement theory, thus, does not offer a direct answer to the underdetermination argument because it says nothing about our *specific perceptual states* and their underdetermination.

In order to adapt the view for the rejection of U5, one could say that we are entitled to behave as if our perceptual states are not underdetermined for otherwise we would be unable to go on with our epistemic lives, and we would be rational in so doing. On this view, what is *rational to do* confers *rational grounds to believe*, thus grounding rational knowledge. There are two important aspects to this strategy: the shift of focus from one's perceptual states to one's actions according to these states, thus yielding the appropriate rational support for one's beliefs; and a pragmatic stance on what one should do or how one should act, namely, as if one's perceptual states were not underdetermined. It is important to highlight these aspects because the radical enactive approach that I am going to present in the following chapters has some merely superficial similarities with the entitlement theory (given a proper adaptation of

the later). In particular, the radical enactive approach to perceptual states claims that a perceptual state is achieved by the exercise of one's abilities in the environment, so it also focus on one's actions. The difference, and we shall see how this works, is that in adequate conditions one's actions *constitute* one's perceptual state, so there is no need to act *as if* one's perceptual states were not underdetermined, because perception is not underdetermined in these conditions. Therefore, adopting a pragmatic stance would be a merely otiose maneuver, given the radical enactive approach. Importantly, there are problems with the entitlement approach that are due to its pragmatic stance:

Supposing we are entitled to act as if a perceptual state was not underdetermined between a perceived proposition and the relevant *radical* skeptical hypothesis, what can we say about more mundane cases? Take once again the example in which I see one of my friends who has an identical twin. Plausibly, in these conditions – given that I know that my friend has a twin brother –, a belief that he is friend A (and not friend B) would not be rationally grounded. But am I *entitled to act* as if this perceptual state were not underdetermined? What am I pragmatically allowed to do? The entitlement theory gives us no answer to the underdetermination skeptical argument in which the alternatives are perceived propositions and *local* possibilities of error – that is, hypotheses that do not aim at undermining the whole of our knowledge, but only portions of it (in this case, my seeing of twin A instead of twin B). Consequently, the entitlement theory is at best incomplete[4].

Another, more biting problem is that the pragmatic stance fails to address the *epistemic* point raised by the paradox. Why should we take our actions to be of any essential relevance to the epistemic rational grounds of our beliefs? Even if the way we act (as if our perceptual states were not underdetermined) is a *condition for* the exercise of our epistemic practices more broadly conceived, it has not been argued that the way we act is *constitutive* of them. This condition could be merely external, and it does seem to be nothing more than a recipe to avoid a general suspension of judgement. The problem is that the skeptical conclusion is precisely that we should suspend or judgements, given the epistemic underdetermination of their

[4] The view would benefit from appealing to the idea of background knowledge, which would enable one to pragmatically rule out certain possibilities of error. But this just goes to show that the entitlement theory is not, by itself, sufficient to explain our entitlement to hold certain beliefs instead of others. Moreover, it would have to explain how background *knowledge* is obtained – and while this is not straightforwardly problematic, it does remain a mystery. One possibility is that background knowledge is constituted by the net of pragmatic entitlements one has, which flirts with a coherentist approach to entitlement and knowledge.

perceptual bases. Granted *this* premise, it seems wide off the mark to answer that we are pragmatically entitled to avoid a suspension of judgement. If an argument could be supplied, however, in order to show that our actions constitute our epistemic position, then our perceptual states *would not be underdetermined* – and this is precisely the route we will take in the following chapters. And, once again, if they were not underdetermined, then there would be no need of a pragmatic stance at all. So the pragmatic approach is either insufficient or unnecessary.

Thirdly, the adoption of a pragmatic stance takes us back to the first mode of identifying the truth of skeptical arguments we mentioned at the beginning: we would concede to the skeptic that our perceptual states, by themselves, are not the sources of rationally grounded knowledge, even as our acting is pragmatically rational. There is a distinction at play here which is analogous to the distinction between the appropriateness of knowledge claims and their truth: just like one can claim knowledge, because it is appropriate to do so in certain occasions despite the falsity of one's knowledge claim (so the skeptic says); so according to the entitlement theory, it is appropriate to act as if one's perception yields the rational grounds to believe, even if the relevant perceptual states are not the actual rational grounds for those beliefs. So, to the extent that this view is committed to epistemological revisionism, it does not dissolve the underdetermination skeptical paradox in the way we are aiming to do.

Having seen the pitfalls of the entitlement theory adjusted to deal with the underdetermination argument, we can now move on to the last alternative to deal with the paradox, namely, epistemological disjunctivism.

1.4. Epistemological Disjunctivism, phase I

Disjunctivism earns its name from the idea canonically expressed by Hinton (1967) that one is *either* perceiving something to be the case *or* having a deviant state (let us focus on hallucinatory states for the time being). Except for those who are trained in the philosophical tradition, the disjunctivist core idea sounds quite intuitive, mainly because 'to perceive' is a factive verb (and so are its cognates). It would be borderline nonsensical for me to claim that I see a cup of coffee to my right, but add that I am not sure about it. Although that is indeed in tune with our practices, linguistic evidence like this constitute a very weak argument in favor

of disjunctivism, since it is easily defeated. The distinction between the appropriateness of a knowledge claim and its truth makes it clear: it might be inappropriate to claim to perceive something while claiming to be unsure about it – common sense might dictate that one should remain silent in such a case, but nothing about the appropriateness of a perceptual claim implies its truth.

Fortunately, there are better arguments in favor of disjunctivism. For a start, we can offer a negative argument against the competing view, indirect realism, according to which perception puts us (at best) in an indirect relation with its objects through sense data. Such views are supported by the infamous argument from illusion. Here is A.D. Smith's rendering of the argument:

> […] whenever something perceptually appears to have a feature when it actually does not, we are aware of something that does actually possess that feature […] This inference is commonly known as the "sense-datum inference," with the immediate object of awareness that the inference introduces termed a "sense-datum." […] since the appearing physical object does not possess that feature which, according to the previous step, we are immediately aware of in the illusory situation, it is not the physical object of which we are aware in such a situation; or, at least, we are not aware of it in the direct, unmediated way in which we are aware of whatever it is that possesses the appearing feature (2002, 25)

The conclusion is of course that 'we are immediately aware of sense-data, and only at best indirectly aware of normal physical objects, in all perceptual situations, veridical as well as illusory' (2002, 26).

Now, it has been long known that either the conclusion does not follow or the argument begs the question (Austin, 1962). From the introduction of sense-data to explain cases of illusion it does not follow that every case of perceptual episode is mediated by sense-data. This would certainly follow, however, should we suppose that illusion and perception share the same epistemological properties, namely, being mediated by sense-data, but then again, this is exactly what the argument aims to achieve. It is fairly safe to say the dark times of indirect realism are over and, with this in mind, we can offer a positive argument for disjunctivism, an argument that shows that a perceptual state and a deviant (hallucinatory, illusory or oneiric) state are not the same kinds of states. This argument is due to McDowell:

> The root idea is that one's epistemic standing on some question cannot intelligibly be constituted, even in part, by matters blankly external to how it is with one subjectively. For how could such matters be other than beyond one's ken? And how could matters beyond one's ken make any difference to one's epistemic standing? [...] When someone has a fact made manifest to him, the obtaining of the fact contributes to his epistemic standing on the question. But the obtaining of the fact is precisely not blankly external to his subjectivity, as it would be if the truth about that were exhausted by the highest common factor (1998b, 390-1).

I side with Ram Neta (2008) in construing this argument as an inference to the best explanation. The fact to be explained is the epistemic difference between a subject's perceiving that *p* and a subject's hallucinating that *p*, for clearly, perceiving offers a better epistemic ground than hallucinating – this is how we come to the idea of *epistemological* disjunctivism. If this fact were explained by the mere presence of an object (or state of affairs) which is external to the perceiving subject, then it would fail to address the internalist point, namely, that the epistemic position achieved by an individual is (or at least must be) accessible to her, which is why it must be at least partly internal. Therefore the epistemic difference between perceiving that *p* and hallucinating that *p* is due to the fact that, when one is perceiving that *p*, the *fact itself* that *p* is the source of one's epistemic position. Following the internalist motif, the perceived fact, which is external to the individual, is the rational ground for one's perceptual belief, and as such it is accessible to her. Another way of putting it is that perception is both factive and the rational ground for one's perceptual beliefs.

Before moving on to a more precise definition of epistemological disjunctivism, a few considerations are in order. First, let us note that the difference in epistemic grounds between perception and hallucination does not commit the epistemological disjunctivist to a metaphysical difference between these two kinds of states, and by that I mean that epistemological disjunctivism is compatible with, though it does not entail, the idea that both kinds of states can *exist* in one's mind. That question is entirely independent of another metaphysical question, one that we cannot remain neutral in respect with, namely: is epistemological disjunctivism compatible with a narrow conception of perception? Such a narrow conception would take perception to supervene on an individual's internal states. Clearly, since we conceive of perceptual states as essentially factive, that is, extending beyond one's internal states; it follows that epistemological disjunctivism is incompatible with a narrow conception of perception. In other words, epistemological disjunctivism takes

perceptual states to be world-involving[5]. For now, that is all we need to say about the metaphysics of perception.

A second point we should notice is that epistemological disjunctivism might be accused of disregarding the widespread intuition that we cannot distinguish hallucinations (and maybe other mental events, such as illusions and dreaming) from actual perceptions. The epistemological disjunctivist can counter this objection by claiming that even though hallucinations and perceptual states do not have the same epistemic properties – the rational grounds that yield the perceptual beliefs – they *do seem alike*. If, however, disjunctivism is compatible with this intuition, how can it explain the difference in epistemic properties between the two kinds of cases? This objection raised by Wright (2002) is what Pritchard (2012, 91-2) calls this the *distinguishability problem*.

In the next chapter, we will take a closer look at Pritchard's own solution to this kind of problem, but for now it suffices to say that it consists in granting that the two kinds of states are indeed indistinguishable, but when one's perceptual states are functioning properly, there is no need to *discriminate* between perception and hallucination in order to rule out the latter. This is important because it goes to show that epistemological disjunctivism is not necessarily committed to phenomenological disjunctivism: in this case, it concedes that the general kinds of hallucination and perception share some phenomenological properties, hence specific tokens of both cannot be distinguished. Pritchard's disjunctivism does that without conceding that the epistemic properties of perception and hallucination are the same. But the epistemological disjunctivist does not need to concede that to her interlocutor. Indeed, the disjunctivist can claim that perception and hallucination *can be distinguished* because they are phenomenologically different in a fundamental aspect. Apparently, doing so might consist in rejecting the widespread intuition mentioned above, so it would fail to do justice to the disjunctivist's claim that her theory is a commonsensical explanation of perceptual states – thus committing disjunctivism to epistemological revisionism. However, the intuition underpinning the view that perception and hallucination have the same phenomenology is not strictly commonsensical, but rather *philosophical*, in that it is prompted by a static conception of perceptual states. In the following chapters, we will develop a (radical) enactive approach

[5] I am thankful to André Klaudat for pointing that out.

to perceptual states that has as a consequence that perception is a dynamic event. Given this, in most cases, hallucination and perception *can be distinguished* and, as we shall see in Chapter Four, when they cannot be so distinguished we are not inclined to ascribe rationality to the person under evaluation. The conclusion is that, in the only kinds of cases in which hallucination and perception cannot be distinguished, we can explain how this is so by a failure of rationality, and therefore the occurrence of a single phenomenological state shared by a particular hallucinatory episode and a particular perceptual state is explained by the lack of the epistemic properties that would normally be grounded on perception.

1.5. Epistemological Disjunctivism, phase II

Epistemological disjunctivism was initially presented as the thesis that one's perceptual states are the rational grounds for one's perceptual beliefs, and that those grounds are the perceived facts themselves that are made available to the subject. But this surely cannot be all: take again the example in which I see twin A, but am fully aware that he has a twin brother, B, who looks the same at that distance, etc. Even if this is *in fact* twin A, my perceptual belief that twin A is over there seems to lack the proper rational grounds, given my background knowledge. The disjunctivist can explain this intuitive assessment by arguing that perception, *in appropriate subjective circumstances*, is a factive rational ground for perceptual beliefs. In this case, I am not in appropriate subjective circumstances because I am aware, or could easily be aware, of the fact that my perception might be misleading. Note, however, that (i) this fact is motivated by a specific possibility of mistake (that there is a twin B), not by a general assessment of the fallibility of perceptual states; and (ii) it is tempting, but not necessary, to construe my inappropriate subjective circumstances in deontological terms, namely, that I *should* know that it is a pair of twins, etc. Instead of using deontological terms, I am using the idea of background knowledge. The latter point is important because deontological conceptions of justification (hence, of rational grounds) have been shown to be defective by Alston (1988b), because they imply doxastic voluntarism, the thesis that we have control over our doxastic states. This is a very implausible thesis, especially concerning perceptual beliefs – so we are better off by avoiding deontological conceptions at the heart of epistemological disjunctivism. Although one clearly *should* not assent to a knowledge claim in significant contrast with one's background knowledge, the epistemic duty here is merely derivative of the more general ideas of consistency and explanation.

Now, this is also not enough, because we could imagine situations in which one perceives that *p*, but one's perception would not qualify as offering the appropriate rational grounds for one's perceptual belief. One such case is the familiar barn façade county case, made popular by Goldman (1976), in which one sees a real barn in the distance, but it happens to be the only real barn in the whole county. The general consensus here is that cases like this do not constitute knowledge because one could easily form a false belief. Some externalist conditions of knowledge (Sosa 1999, Pritchard 2005) aim to capture this intuition by claiming that one's true belief (that there is a barn over there) is not safe, meaning that it could easily be false. More precisely, a belief is safe iff in most or all nearby possible worlds in which S believes that *p*, *p* is true. The details here are not greatly important, because the epistemological disjunctivists do not need to deal with the more contentious externalist claim that knowledge is *analyzed* in safe belief, but something along the same lines could explain the case in a disjunctivist framework.

Neta (2008), for instance, notes that epistemological disjunctivism is compatible with the condition that the environment must possess certain features in order for the exercise of perceptual capacities to provide the appropriate support for one's belief. This is not to say that these merely external conditions are constitutive of what is accessible or internal to the agent, but that they must be satisfied for perception to rationally ground her belief. Adapting the safety condition could be done as follows: objectively (or externally) appropriate circumstances are those in which a perceptual belief could not easily be false. More precisely, an environment is safe iff in most or all nearby possible worlds in which S perceptually believes that *p* in that environment, S's perceptual belief is true. If an individual finds herself in an environment where a perceptual belief could easily be false, then her perception does not rationally ground her belief – such for instance is the case in barn-façade county. Therefore, on this view, particular exercises of perceptual capacities are situated, in the sense that *being able to perceive* is a capacity that is not instantiated regardless of the environment one is in. What might seem tricky about this argument is that we are explaining how perception could offer the rational grounds to believe by appealing to the notion of safe *belief*. The disjunctivist would seem to beg the question here, but we can avoid reading the argument this way as long as we hold on to the idea that those external conditions are not constitutive of one's knowledge; instead, their function is to put a pair of bracket into less than optimal cases,

such as Gettier-like scenarios. In short, not all conditions that must be satisfied are constitutive of perceptual knowledge.

Finally, there is another way in which perception is dependent upon the obtaining of specific conditions, namely, the correct functioning of one's cognitive apparatuses. These might be said to be external or objective in the sense that they are not extensively under one's control – for instance, the ability to pay attention to certain features of the environment, the proper functioning of one's motor system and the adequate flow of information through afferent and efferent nerves. However, it is plausible to suppose that an individual who finds herself systematically mistaken by the exercise of specific perceptual capacities can, by becoming aware of that, undercut such exercises in order to avoid further mistakes. Similarly, to some degree, attention is something one can train and refine, and one's personal history plays an important role in determining the sort of things one pays attention to. Therefore, the obtaining of these kinds of conditions is not entirely out of one's control – I thus take them to be in-between subjective and objective conditions, contrary to Pritchard, who systematically counts these conditions among the merely external ones. He writes:

> By the former contrast [between a scenario that is *objectively* epistemically good or bad] I have in mind facts about the nature of the environment and about the cognitive faculties of the agent in question. (Pritchard, 2012, 29).

It seems that by doing so we would ignore the subtlety that, although some cognitive apparatuses have external conditions for their proper functioning, the fact we can train and refine them is within our ken. Therefore, they are internal to a very important degree. This is especially important because we do not risk losing sight of the role played by one's actions and development (both at the phylogenetic and ontogenetic levels) in the achievement of one's perceptual status, which is the core idea of the radical enactive approach I will combine with epistemological disjunctivism in the following chapters.

1.6. Dr. Disjunctivist or: How I Learned to Stop Worrying and Love Factivity

We are now able to offer the complete disjunctivist thesis. The following is loosely inspired by Pritchard's definition (2012, 13), given the adaptations mentioned in the previous section:

In adequate objective, subjective and in-between circumstances for the exercise of perceptual capacities, if S perceives that *p*, the perceived fact that *p* is the rational ground for one's perceptual belief that *p*.

With this formulation of the disjunctivist thesis, I intend to remain neutral on whether perceptual states (the rational grounds for belief), together with the relevant perceptual beliefs, constitute knowledge or whether those states are themselves knowledge and therefore yield reasons for believing. On the first interpretation, we have a belief-first epistemology (this is Pritchard's 2012 position), on the later, we have a knowledge-first epistemology (which is Millar's 2011 position). One advantage of adopting the more heterodox knowledge-first approach is not having to solve what Pritchard calls the *basis problem* (2012, 25), namely, how can perception be the basis for one's knowledge if it is (or seems to be) a specific kind of knowledge? On a knowledge-first approach, perception is not the basis for one's knowledge, it is instead the basis for one's perceptual belief, so the problem is easily avoided. By any means, we can settle with the general claim that perceiving that *p* is both factive and rationally grounded, so it qualifies as rationally grounded knowledge. Now it is clear how epistemological disjunctivism puts us in a position to block the skeptical conclusion. Let us first recall that the argument we are dealing with is:

(U1) If S has a perceptual state indicating *p* which is compatible with SH, which S knows to imply ¬*p*, then S's perceptual state does not constitute the rational grounds to believe that *p*.

(U2) S's perceptual state is compatible with SH.

Therefore, (U3) S's perceptual state does not constitute the rational grounds to believe that *p*.

(U4) Rationally grounded knowledge that *p* implies rational grounds to believe that *p*.

Therefore, (SC) S does not have rationally grounded knowledge that *p*.

Through factivity, it becomes clear that epistemological disjunctivists are committed to the rejection of U2 (luckily for Bono, we are not a very large crowd and are unlikely to impact ticket sales). This is so because, given the satisfaction of objective, subjective and in-between conditions, one's perceptual state is partially constituted by the *fact* that *p* (plus, of course,

one's cognitive apparatuses). Given that *p* implies ¬SH, when one is perceiving that *p*, one's perceptual state is *not* compatible with SH. Here is John McDowell on the topic:

> If a perceptual state makes a feature of the environment present to a perceiver's rationally self-conscious awareness, there is *no* possibility, compatibly with someone's being in that state, that things are not as that state would warrant her in believing that they are, in a belief that would simply register the presence of that feature of the environment. The warrant for belief that the state provides is indefeasible; it *cannot* be undermined (2011, 31).

The diagnosis of this skeptical paradox offered by the epistemological disjunctivist is that the conception of perception upon which the paradox is based fails to do justice to the fact that, when one is actually perceiving that *p*, one is in a better epistemic position in comparison to the deviant cases in which one is not perceiving that *p*, states such as hallucinating, dreaming and being a disembodied brain in a vat. Moreover, this epistemic difference has to be at least partially subjective, accessible to the perceiving subject, for it is the only way to explain the possibility of rationally grounded perceptual knowledge. This is not to say, as we have claimed at the beginning, that this is *the only sort of perceptual knowledge*, but that is exactly the kind of knowledge that the skeptic challenges.

Finally, there is some room for controversy here, given the appeal to factivity in perception. Most philosophers would agree that we are fallible creatures, so to say that a perceptual state (in the appropriate conditions, and so on) is factive might seem to conflict with that intuition. After all, when one perceives that *p* in such conditions *one could not be wrong about it*, as the perceived fact itself is made available to oneself, as McDowell notes in the quote above. The response to that objection offered by McDowell (2011) and also by Millar (2011) is that, although a perceptual state is infallible (assuming those conditions are satisfied), the capacity to exercise one's perceptual abilities is not. Hence, one could fail to exercise such abilities, but when one properly exercises them, there is no possibility of mistake.

1.7. Disjunctivism, knowing-that and conceptualism

The talk about perceiving *that p* and about perceived facts being the *rational grounds* for holding perceptual beliefs seems to commit epistemological disjunctivism to conceptualism about perceptual experience, which is the thesis that perception has an irreducible conceptual

content as defended by McDowell (1994, 2011) and Brewer (2003) following Sellars (1997). I do not aim to argue in favor or against conceptualism here, my goal is instead to shed some light on the logical relation between epistemological disjunctivism and conceptualism.

According to the conceptualists, perception has to be conceptually articulated in order for its deliverances to occur in reason-giving relations, otherwise we would be embracing the Myth of the Given, that is, the explanatory gap between a non-conceptualist view of perception, which would thus be *given* independently of the perceiving individual's conceptual capacities, and of the individuals positive epistemic position. Take for instance Brewer's argument (2003, chapter 3) for the idea that perception must be conceptually articulated in reason-giving relations (enabling deductive and inductive inferences) in order for particular episodes of perception to serve as rational bases of belief formation. Given that perception determines the contents of one's beliefs about a mind-independent world, then necessarily perception has to be articulated in reason-giving relations, i.e., conceptually, otherwise one would have *no reason* to hold a particular belief that *p* about one's surroundings instead of any alternative belief *x*, which means that perception *would not* contribute to determining the content of one's beliefs. In other words, if perception were to deliver a non-conceptual given, then its occurrences would not be able to serve as reasons for our particular beliefs about the world.

Epistemological disjunctivism seems to entail conceptualism because whatever turns a true perceptual belief into knowledge is, according to the disjunctivist, accessible to the subject, enabling her to know that she knows, through reflection or introspection, whenever she perceptually knows something[6]. This means that one can know reflectively that one is in a paradigmatic case of perception (where subjective, objective and in-between conditions are met), hence in a case of knowledge, whenever one is indeed in such a case. If we add to that the idea that one *must* access one's epistemic credentials in order to achieve rationally grounded knowledge – a condition of reflexivity – then conceptualism seems unavoidable. As

[6] Pritchard applies a distinction here, according to which reflection is understood as introspection plus a priori reasoning (2012, 123), but I will use these two terms interchangeably, in part because it is not clear what he means by 'a priori reasoning', in part because this distinction is especially needed to avoid the indistinguishability problem, that is, the problem of explaining why we can know that we know in paradigmatic cases of perception and cannot do so in the equivalent bad cases, supposing that they are phenomenologically identical for the subject. This problem arises only if we assume there is a shared phenomenological level between perception in paradigmatic cases and the relevant bad ones, in a way that the variation of disjunctivism I defend in the next chapter is able to avoid.

in Brewer's argument, if the contents of one's perceptions were not conceptual in nature, one would not be able to take them into a conceptual articulation, thus taking these perceptual states to be the rational grounds that are sufficient for rationally grounded knowledge.

Some varieties of conceptualism are committed to epistemological disjunctivism as well. In *Singular Thought and the Extent of Inner Space* (1998a), McDowell endorses the Russellian idea of *singular thought*, a thought that could not be entertained in the absence of its referents, and rejects the sense-data constraint, according to which one could only genuinely refer to subjective entities that are immune to Cartesian doubt. The connection with disjunctivism becomes clear if we note that there is nothing semantically common to cases of successful singular reference and non-referring thoughts, such as Fregean *Scheingedanken*, for singular thoughts refer non-descriptively. In other words, there is no semantic common factor between genuine reference and the relevant bad cases wherein a subject fails to refer because she is not presented to an object. To be sure, disjunctivism is not an inevitable corollary of conceptualism *per se*, but it does follow from the role played by non-descriptive conceptual reference and the idea that such reference essentially provides the reasons for beliefs about a mind-independent world[7].

Given all this and the talk about perceiving propositions, it seems straightforwardly plausible that epistemological disjunctivism entails conceptualism, which is a view that I myself have held (Rolla 2016b). But I now think this was too hasty. Firstly, let us note that epistemological disjunctivism is a view about perceptual knowledge-that, *it has no saying whatsoever* on other forms of perceptual knowledge, such as knowledge-how, -where and -when. By itself, it does not even entail that non-conceptual perception lacks epistemic power. Therefore, the claim that perceptually knowing-*that* requires a conceptual articulation of

[7] Brewer (2003) holds a similar view in his extensive articulation of key conceptualist ideas. According to him, the perceptual experiences entertained by a subject about a mind-independent world directly provide reasons for her beliefs about the world. It is central to his view that reference to external objects in a mind-independent world is fundamentally non-descriptive, i.e., demonstrative. The reason for this is that only demonstrative reference can rule out the possibility of massive reduplication (2003, chapter 2). The argument (known as 'Strawson argument') runs like this: if our reference to objects in a mind-independent world were exclusively descriptive, then we would be unable to rule out the logical possibility that, for each object presently perceived, there is a qualitatively identical object somewhere else in the universe which satisfies the same descriptions we employed while trying to refer to that presently perceived object. Consequently, we would be unable to know that we successfully refer to any external object inhabiting a mind-independent world. However, given that we *do* know that we do successfully refer to such objects, we must reject the premise that our reference is exclusively descriptive.

experience is hardly surprising – but equally uninformative about other varieties of perceptual knowledge. My aim in the third chapter is to offer a comprehensive view of these different varieties of perceptual knowledge and, alongside with the second chapter, to show that the main ideas of epistemological disjunctivism can be applied, mutatis mutandis, to non-conceptual and non-contentful varieties of perceptual knowledge.[8]

Secondly, epistemological disjunctivism is neither committed to, nor motivated by, the claim that whenever one finds oneself in the appropriate conditions to achieve rationally grounded perceptual knowledge that *p*, one has *immediate, reflexive* access to one's rational grounds. Remember that the abductive argument proposed by McDowell (1998b) is an attempt to explain the different epistemic positions one is in when one is, on the one hand, perceiving that *p* and, on the other, hallucinating that *p*. Even assuming a meager epistemological internalism – according to which this difference has to be at least partially internal, or pertaining to the subject – all that follows is that the perceived fact must be *accessible* to the individual in order for it to rationally ground her perceptual belief. If the perceived fact is *accessible*, then it may be *conceptualizable*, though not necessarily *conceptual*.

Thirdly, and more importantly, what is at play here is the fact that the difference in epistemic position between perceiving and hallucinating has to be at least partially internal to the individual, as we said, and this by no means implies that one has to be able to reason one's way from the perceived fact to one's own epistemic position. That point is connected with the rejection of the Myth of the Given, for McDowell and other conceptualists take it that the only way to reject such myth is by accepting conceptualism. But this is not the case. Following Hurley (2001), Noë (2004, 2012), Hutto & Myin (2013) and others that have defended an enactive approach to cognition, I claim that we can reject the Myth of the Given by taking the exercise of our bodily abilities to be constitutive of our perceptual states. We *achieve* our perceptual states by exercising our bodily abilities in specific environments, therefore, perception is not just *given*. Moreover, this is the precise sense in which the difference in epistemic grounds between perceiving and hallucinating is partly due to the individual: it is

[8] There is a plausible explanation of this. Epistemological disjunctivism is viewed as a response to the underdetermination argument, and, to my knowledge, there is no similar argument set against our *knowledge-how*. That is why epistemological disjunctivism is a thesis about perceptual knowledge-that – and, given that most skeptics *and* epistemological disjunctivists assume a stark divide between perception and action, the idea that our actions might be underdetermined – thereby failing to achieve the relevant ends – is largely, if not absolutely, overlooked by epistemologists.

due to her bodily abilities. As for the access required by the internalist motif, we can clearly distinguish two kinds of access: (i) the access to the fact that rationally grounds one's belief, and (ii) the second-order access to the fact that one accesses the fact that rationally grounds one's belief. A radical enactive approach to cognition explains (i) in terms of bodily abilities, but also claims that the embodied access is irreducible (that is why it is *radical*). While it is plainly possible to enter a second-order mode of access, that can only be done if one is already properly engaged with the environment. But I am getting ahead of myself, as this is the subject of the next chapter.

1.8. Concluding Remarks

Here I have presented the skeptical argument of underdetermination. I hope to have sufficiently distinguished, at least at a first glance, the (radical) enactive approach I am going to present in the next chapter and the entitlement-pragmatic approach to that argument. I followed McDowell (1998b) and Neta (2008) in motivating epistemological disjunctivism as a best explanation to the difference between one's epistemic grounds when one perceives something, on the one hand, and when one hallucinates something, on the other; but I aimed to do so by leaving enough room for an enactivist view of cognition – I therefore, disagree with Pritchard's (2012) claim that the functioning of our cognitive apparatuses is a mere external or objective condition for rationally grounded perceptual knowledge, in the same way that the environment is.

2. Epistemic Immodesty and Embodied Rationality

Abstract

Based on Pritchard's distinction (2012, 2016) between favoring and discriminating epistemic grounds, and on how those grounds bear on the elimination of skeptical possibilities, I present the dream argument as a moderate skeptical possibility that can be reasonably motivated. In order to block the dream argument's skeptical conclusion, I present a version of phenomenological disjunctivism based on Noë's enactivist account of perceptual consciousness (2004, 2012). This suggests that perceptual knowledge is rationally grounded because it is a form of embodied achievement – what I call *embodied rationality* –, which offers a way of dissolving the pseudo-problem of epistemic immodesty, namely, the seemingly counterintuitive thesis that one can acquire rationally grounded knowledge that one is not in a radical skeptical scenario.

2.1. Favoring and Discriminating Epistemic Grounds

As we have seen, disjunctivism about perceptual knowledge is not an orthodoxical view: contrary to modern philosophical tradition, one of its main tenets is that perception is sometimes factive and that non-factive states do not have the same epistemic status as perception. Alternatively, a disjunctivist might say that there is no epistemic common ground between perception in paradigmatic cases and non-perceptive states, like dreams, hallucinations and illusions. The view is especially relevant against a variation of skeptical argument that hinges on the idea that our perceptual states do not give us the rational bases for believing mundane proposition rather than skeptical hypotheses. When dealing with skepticism, therefore, factivity is not enough: an interesting version of epistemological disjunctivism has to claim that perception is a factive *rational* basis for holding beliefs about the external world (when objective, subjective and in-between conditions are satisfied).

In order to advance the view without committing it with the seemingly absurd consequence that we have rational grounds to discriminate between actual possibilities – say, that there is a goldfinch yonder – and the relevant skeptical hypotheses – e.g., that I am an envatted brain "hallucinating" a goldfinch – Pritchard (2012, 2016) introduces an independently motivated

distinction between *favoring* and *discriminating* epistemic grounds. Imagine I hold an apple and form the belief that it is a Pacific rose apple (*p*). An interlocutor could ask me how I know it. With this she could mean how I know that *p* obtains instead of its being a red delicious apple (*q*). This possibility is a close one, and it seems that I must be able to discriminate a Pacific rose apple from a red delicious apple in order to know perceptually that *p*, for they are quite similar. Things start to get interesting if we consider local skeptical possibilities. Imagine my interlocutor asks me how I know that it is a Pacific rose apple rather than a perfectly manufactured counterfeit apple (*r)*. If this possibility is reasonably well-motivated[9] – if we are both well aware that counterfeit apples are abundant in this area, for instance – then my initial belief that *p* was temerarious and does not amount to knowledge, for I would be unable to discriminate *p* from *r* just from looking. In order to know that *p* obtains, then, maybe I would need to smell the putative apple, feel its texture more attentively, weight it and so on, which means I would need to appeal to accessible discriminating evidence. It is quite another matter if *r* is not reasonably well-motivated. If there is no particular reason to suppose that *r* could be the case – if my interlocutor asks me out of the blue how do I know that *p* since *r* just *could* be the case – then there is no need to discriminate between *p* and *r* from obtaining. Favoring epistemic grounds (such as my current perception and my background knowledge) are enough to support the belief that *p* over *r* if *r* lacks a reasonable motivation[10].

The crux of the matter, argues Pritchard, is that radical skeptical possibilities, such as being a brain in vat, are necessarily reasonably unmotivated, for there is no particular reason that could be adduced in their support (Pritchard, 2016, 141). A skeptic would not (indeed, could not) claim that there is some evidence that supports the possibility that we are envatted brains, for this would be self-defeating. Neither are there accessible discriminating evidences one could discover which rule out radical skeptical possibilities like that one, for such possibilities supposedly undermine all of our putative knowledge at once – that is precisely what makes them *radical*. However, the epistemological disjunctivist is in a position to say that the propositions we come to believe everyday do enjoy favoring (non-discriminating) epistemic

[9] 'Reasonably' here means 'appropriately supported by reasons'. Moreover, as it will become clear in §2.6, I am not using 'reasonably' and 'rationally' interchangeably.

[10] This is analogous to the famous zebra case originally found in Dretske (1970): one sees a zebra in the zoo, but if there are available reasons to suppose that it might be a cleverly disguised mule, then one's epistemic position is surely undermined. In this case, one needs discriminative evidence to dismiss the possibility that it might be a cleverly disguised mule. However, if this possibility is not properly motivated, then one's epistemic position qualifies at least *prima facie* as knowledge.

support over radical skeptical possibilities, since our perception is a factive rational basis for believing. Now, the putative problem of epistemic immodesty arises if we join this view with the *closure principle for rationally grounded knowledge* – namely:

If S rationally knows that *p* and S competently deduces *q* from *p*, forming a belief in *q* and retaining the rationally grounded knowledge that *p*, then S rationally knows that *q*.[11]

This principle enjoys some intuitive plausibility; it does not look like we could reject it with impunity. Moreover, epistemological disjunctivism *per se* offers no ground for the rejection of the principle, which is indeed an advantage of the view. If we combine epistemological disjunctivism with this closure principle, it follows that we can acquire rationally grounded knowledge of the denials of radical skeptical hypotheses. That we know in a rationally grounded way (even if not discriminatively) that we are not brains in vats, for instance, is what Pritchard takes to be a case of *epistemic immodesty*. He writes:

> […] If the epistemological disjunctivist extends her anti-skeptical line to this form of radical skepticism [closure-based radical skepticism] by contending that we can have rationally grounded knowledge of the denials of radical skeptical hypotheses, then it can look like an unduly strong response to the problem of radical skepticism […] Epistemological disjunctivism, so construed, seems committed to embracing a kind of *epistemic immodesty*, in that intuitively we are unable to have rationally grounded knowledge of these propositions [denials of radical skeptical hypotheses]. (Pritchard, 2016, 179-80)

Epistemic immodesty consists in the possibility of acquiring *rationally* grounded knowledge – as opposed to mere externalist knowledge – of the denials of radical skeptical hypotheses, which seems to be a case of dogmatism. On a conception of rationality according to which to be epistemically rational implies possessing available reasons to believe (a conception we will challenge bellow), it is counterintuitive to say that we have conclusive factive reasons to believe that radical skeptical hypotheses are false. That unappealing consequence would compel us to reject the disjunctivist thesis or the closure principle (or both). Since that version of the closure principle is at least as plausible as epistemological disjunctivism, and given that

[11] Pritchard (2016, 13) calls this formulation *diachronic* because it differs from the classical formulation - namely: if one knows that *p* and knows that *p* entails *q*, one knows that *q*. Moreover, and importantly, the diachronic version of the principle avoids uninteresting counterexamples that affect the classical formulation. Without the restriction of *rationally grounded* knowledge, Williamson (2000, 117) originally expressed this principle diachronically under the name of *intuitive closure*.

there is no independent ground to suppose both should be abandoned together, epistemic immodesty would motivate a *reductio* of disjunctivism itself. Alternatively, one might argue, the fact that epistemological disjunctivism entails epistemic immodesty turns out to weaken epistemological disjunctivism in comparison with other anti-skeptical positions, such as epistemological contextualism, which would concede to the skeptic that in certain contexts we *do not know* that radical skeptical hypotheses are false (thus being "epistemically modest").

We will inquire in §2.7 whether epistemic immodesty really is as problematic as it may seem. I intend to resist the temptation to reject or water down disjunctivism based on this consequence, for I contend that a more inclusive notion of epistemic rationality dissolves the apparent problem of epistemic immodesty. For the time being, we must take a closer look at moderate skeptical possibilities and see how they fit the schema of discriminating and favoring epistemic support.

2.2. Dream Skepticism and Phenomenological Conjunctivism

If radical skeptical possibilities are reasonably unmotivated by their very nature because they could not be supported by particular reasons, then a moderate skeptical possibility could, at least in principle, be reasonably motivated at the expense of having a narrower scope. The *dream possibility* fits the bill because it is possible to offer reasons in its favor, although it is traditionally taken to be less effective than the Evil Genius and similar hypotheses[12]. As a motivation, one could say that most people often dream and, when they are dreaming, they falsely take those dreams to be veridical representations of their surroundings. As one would expect, these are the kinds of facts that are not challenged by the dream skeptical possibility. Now, if we can reasonably motivate this moderate skeptical possibility, then mere favoring epistemic support for *p* is not enough to rule out the possibility of merely dreaming that *p* (so of *p*'s not being the case), for one must be able to *discriminate* between perceiving that *p* and dreaming that *p*. This is a consequence of the thesis that a reasonably well-motivated alternative can only be discarded if a subject has discriminating epistemic support against it. Put in another way, the idea is that, for a large class of believed propositions about the

[12] Since at least Descartes's *Meditations*, dream possibilities are taken to be ineffective against *a priori* knowledge. Even if this kind of knowledge does not exist, some general facts about our constitution – such as that we are sometimes awake and that most people dream, etc. – are presupposed by the dream argument and could not be threatened by it.

external world, there is the *nearby possibility* of entertaining these propositions in a dreaming state, and this modal proximity is what makes the dream possibility so acute. One could argue, then, in the following way:

(D1) If S has rationally grounded knowledge that *p* then S is able to achieve rationally grounded discriminative knowledge that she is not dreaming.

(D2) S is unable to achieve rationally grounded discriminative knowledge that she is not dreaming.

Therefore, (DC) S does not have rationally grounded knowledge that *p*.

D1 is based on the closure principle for rationally grounded knowledge, which seems to be beyond dispute. Therefore, if we want to reject the skeptical conclusion DC, we must take a closer look at D2 and its underlying motivation. The philosophical platitude that one is unable to achieve rationally grounded knowledge (in particular of a discriminative sort) that one is not dreaming is anchored in a phenomenological thesis – call it *phenomenological conjunctivism*:

The content C of S's waking experience is phenomenologically indistinguishable, from S's point of view at any given time, from a content D of a possible dreaming experience.

The justification for the phenomenological conjunctivist thesis is the fact that, when we are dreaming, we misleadingly take oneiric experiences as veridical representations of our surroundings, in such a way that we are unable to distinguish between dreaming and perceiving – for there is a common phenomenological level between these two kinds of states. Therefore, in order to avoid the skeptical conclusion DC, we need to undermine the phenomenological conjunctivist thesis, and this in turn depends on examining whether that fact supports phenomenological conjunctivism.

One way to do so is to dispute the fact itself (or the way it is usually construed). This can be done by claiming that we do not *believe* in the contents of our dreams, for dreaming that *p* and believing that *p* are different mental events. Sosa (2007) explores this view based on the

distinction between events that happen *in dream* and events that happen *while one dreams*[13]. Events in dream may encompass belief-like states, but that is different from the beliefs one has while awake and that survive in the background of one's conscience while dreaming. One could reinforce this distinction by arguing that believing is in principle open to rational evaluation, while dreaming is not. One should, after all, review one's beliefs given the accessible evidences, but it seems entirely out of place to rationally evaluate a belief-like state that happens in a dream.

One problem with this line of response is that it ignores what happens when one entertains a lucid dream, for lucid dreams do not seem to be completely devoid of doxastic states – indeed, it is reported that lucid dreamers are able to perform certain tasks, like counting time in the dream (LaBerge, 2000). Moreover, contrary to what Sosa claims, it is quite possible to believe in what happens in a dream during a waking experience: several times I seem to suddenly remember something during the day – say, that there were some fruits in the fridge – only to find out later that I had dreamt it. In this case, it seems that fragments of the dream played a doxastic role and could be rationally assessed in a waking experience. I can open the fridge in the morning and become genuinely surprised to find out that there were no fruits there. Nightmares can serve as counterexamples as well: often one wakes up believing that so-and-so happened and it takes a while, and maybe a good deal of ambientation, to realize it had not. This suggests that a belief (or a belief-like state, if you will) formed in dream can transcend the dreaming state and become open to rational evaluation in a waking experience. If this is so, the idea of distinguishing beliefs from oneiric belief-like states does not seem appealing and the fact that we often take dreams to be veridical representations remains unscathed.

There is indeed an available alternative: to question whether the fact about our inability to distinguish in-dreams states from veridical states lends the necessary support to phenomenological conjunctivism. Remember that phenomenological conjunctivism is a general thesis about the indistinguishability of a waking content C, from S's point of view *at any given time*, from a content D of a possible dreaming experience. The fact that's under

[13] Wittgenstein (1969) proposes a similar strategy: 'The argument "I may be dreaming" is senseless for this reason: if I am dreaming, this remark is being dreamed as well - and indeed it is also being dreaming that these words have any meaning' (§383). See also §676.

scrutiny, however, is that we cannot discriminate dream from reality *in dream*. I submit it is a non-sequitur to arrive at the general thesis from this fact, for it is plainly possible to discriminate waking experience from dreaming experience *while awake*. There is a grain of truth in asking for someone to pinch you to see whether you are dreaming (anecdotal as that may be), for waking experience *is* different from dreaming experience in a substantial way[14]. This point has been made in a slightly different key by a few philosophers. Austin's enlightening thoughts on the matter deserve to be quoted at some length:

> [...] We have the phrase 'a dream-like quality'. Some waking experiences are said to have this dream-like quality, and some artists and writers occasionally try to impart it, usually with scant success, to their works. But of course, if the fact [that 'delusive and veridical experiences' are not 'qualitatively different'] here alleged *were* a fact, the phrase would be perfectly meaningless, because applicable to everything. If dreams were not 'qualitatively' different from waking experience, then *every* waking experience would be like a dream; the dream-like quality would be, not difficult to capture, but impossible to avoid. (1962, 48-9).

More to the point, here is Rödl:

> From the fact that, when I am fooled, I do not know that I am, it does not follow that, when I am not fooled, I do not know that I am not. When I know that *p* as I perceive it to be the case, then I know that I perceive that *p*. Thus I am in a position to distinguish my situation from any possible situation in which I would be fooled, for, in any such situation, I would not perceive that *p*, while in the given situation I do. (2007, 158)

If we hold on to the idea that waking experience is fundamentally different from dreaming experience, then we are straightforwardly committed to the rejection of phenomenological conjunctivism: it is *not the case* that waking and dreaming experiences share the same phenomenology and are, therefore, indistinguishable. In some cases, namely, when we are awake, we are plainly capable of distinguishing the two kinds of states. So it seems that in order to deal with dream skepticism we have to conceive of perceptual experience in terms of phenomenological disjunctivism. However, this result is dialectically insufficient to reject the premise in the skeptical argument that says it is humanly impossible to achieve rationally grounded discriminative knowledge that one is not dreaming, because we still need a

[14] Sosa intends to defend this conclusion by the distinction we mentioned above. Therefore, Sosa and I share the same conclusion, but I offer a different rationale. Here is his view on the matter: 'What enables us to distinguish the two content-identical states is just the fact that in the dream state we do not affirm anything—not that we are veridically perceiving an external world, nor that we are not—whereas in waking life we do knowingly perceive our surroundings. This by our lights suffices to make the two states distinguishable.' (Sosa, 2007, 18-9).

reasonable explanation of *how* can we distinguish reality from dreaming. What exactly is present in the former and absent in the latter?

2.3. Enactivism and Phenomenological Disjunctivism

Inspired by J.J Gibson's ecological account of perception, Alva Noë proposed an independently motivated account of perceptual consciousness – what he called *enactive approach* (2004) and *actionism* (2012) – which offers a plausible, empirically grounded and philosophically sound rationale for phenomenological disjunctivism. As we shall see, the enactivist stance is part of a broader program that aims at identifying the place for action in cognition by lessening the role played by representation and content more generally[15]. I am not claiming here that enactivism is the *only* possible way of motivating phenomenological disjunctivism, but it is indeed hard to conceive of a viable alternative that holds on to the idea that perception is fundamentally representational, because this would imply that there is a shared level between perception and deviant states, namely, their representational nature. The basic tenet of enactivism is that conscious perception is an activity performed by the exercise of sensorimotor abilities – this means that one's perceptual state is constituted by the practical way one can engage with the world, by the information one caries and receives through one's actions and responses (in the next chapter, we will take a closer look on what notion of information is required by enactivism). By action we mean what one does, and what one is capable of doing is dependent upon the kind of body one has – so the enactive approach is closely related to the view that cognition is embodied[16]. This a *radical* view because it holds that not all of our cognitive interactions with the environment need to be explained by positing to internal representations, for at least some instances of perceptual cognition can be

[15] There are naturalist views of representational structures according to which representations are essentially causally coupled with the environment, such as Millikan's (1995) and Clark's (1997). See Chemero (2009, chapter 3) for a detailed exposition of those conceptions. On those views, it is not a necessary condition for a structure to play the role of representation that it can at least sometimes perform its function in the absence of its target. Therefore, representations so conceived might in principle be implemented in embodied cognitive systems, which are causally coupled with their environments. One such suggestion is the use of coupled oscillators to model brain activity, i.e., circuits that fire either rhythmically by receiving voltage or by creating momentum through mass. However, as Chemero points out, work on dynamical systems theory and embodied/enactive cognition succeeds in explaining several cases of cognition – including perception and discrimination in robotics, language use, decision making and social coordination – without positing representations (even causally coupled ones).

[16] See Rowlands (2010) for a subtle approach to the different 'e's in the 4e program: extended cognition, embodied mind, embedded cognition and enactive approach. For a classical work on the subject of embodied mind, see Varela, Thompson and Rosch (1991).

explained, especially their phenomenal character, by the activities performed by the individual in specific environments.

At a philosophical level, enactivism is a phenomenological account that aims to do justice to our perceptual experience. Its main philosophical motivation is to explain two related facts about our encounter with objects without appealing to representations as internal models of the world, and if it can be done, then enactivism is conceptually sound. First, the fact that perception is a perspectival event but is also about the objects themselves, regardless of the perceiver's point of view. Gibson provides the original arguments for enactivism in his discussion of the ambient optic array, i.e., the point of observation wherein light converges in solid angles after being reflected and diffused in the ambient. He writes:

> The optic array *changes*, of course, as the point of observation moves. But it also does *not change*, not completely. Some features of the array do not persist, and some do. The changes come from locomotion, and the nonchanges come from the rigid layout of the environmental surfaces. Hence, the nonchanges specify the layout and count as information about it; the changes specify locomotion and count as another kind of information, about the locomotion itself. (Gibson 2015, 65-6).

'Nonchanges' here is the idea of invariant information accessible through movement. Consider this example from Noë: as I look at a plate on the table, it seems to be oval or oblong depending on my perspective, but I also perceive it as being round – its roundness is an invariant information. Thus, I perceive the plate as round because I enjoy the practical knowledge of how to move and engage with its different aspects as they unfold in my experience, and such practical knowledge allows me to grasp what stays constant when I perceive the plate, namely, its roundness, and what shifts when I move around, its look or appearance. The available invariant information, the plate's size and shape, is acquired through my actions, not by registering aspects of the plate in an internal representation and building a fuller model upon it. Following Noë, the emphasis here is on the exercise of *sensorimotor abilities*, my abilities to register sensorial information not only through the changes undergone by the object, but through the changes made available by the movements I perform. (2004, 63-4).

The second fact that enactivism aims to explain is that objects present themselves as facets but also as wholes: as I look at the bookshelf in front of me, I see aspects of books, mostly their

spines, but I am perceiving *the books*, not just slices of them. Here is Gibson's explanation of how the presence of objects as wholes is made available through movement:

> The layout of the environment includes unprojected (hidden) surfaces at a point of observation as well as projected surfaces, but observers perceive the layout, not just the projected surfaces. Things are seen in the round and one thing is seen in front of another. How can this be? Information must be available for the whole layout, not just for its facades, for the covered surfaces as well as the covering surfaces. What is this information? Presumably it becomes evident over time, with changes of the array. (idem, 69).

The fundamental idea here is that I perceive objects in their entirety despite seeing only facets of them because they are *virtually accessible* given my sensorimotor abilities to navigate in the environment: I perceive books and not only slices of their covers because I have the know-how to assume different perspectives and integrate them in a dynamic experience[17]. On this view, therefore, perception is essentially dynamic: we access the world by navigating through it and not by registering internal models and computing them to create our complete experience[18].

Gibson's revolutionary book was originally published in 1979 – credit is also due, however, to a philosopher who offered the very same argument, or something strikingly close to it, in the same year. Here is Stanley Cavell's description of objects as moons in his discussion of what he calls 'traditional epistemology':

> Thus this skeptical picture is one in which all our objects are moons. In which the earth is our moon. In which, at any rate, our position with respect to significant objects is *rooted,* the great circles which establish their back and front halves fixed in relation to it, fixed in our concentration as we gaze at them. The moment we move, the "parts" disappear, or else we *see* what had before been hidden from view —from any other position than one perpendicular to *that* great circle, *that* "back half" which alone it establishes *can be seen:* to establish a *different* "back half", a *new* act of diagramming will be required, a new position taken, etc. This suggests that what the philosophers call "the senses" are themselves conceived in terms of this idea

[17] To hold otherwise – that our visual access to objects is restricted to their surfaces – is to fall prey, as Thompson Clarke famously put it, to a *sleight of mind* (Clarke, 1965). In Clarke's account, that can happen because we are invited to single out slices of objects in describing our access to them. That, however, would only make sense if we arbitrarily choose units to divide the objects.

[18] Noë also aims to explain our perception of colors through enactivism (Cf. Noë, 2004, chapter 4): although surfaces hardly are uniformly colored, we are perfectly able to distinguish the actual shade of a surface from the variations caused by the way light reflects on it on different angles.

> of a geometrically fixed position, disconnected from the fact of their possession and use by a creature who must *act*. (Cavell 1979, 202)

Thus, at a philosophical level, the arguments for enactivism have their historical precedents not only in Gibson's work, but also in Cavell's[19]. Enactivism is also in tune with empirical findings: cases of what Noë calls *experiential blindness* count as direct support for it (2004, 8-11). Those cases are exemplified by experiments where a subject wears glasses with inverted lenses, which cause left and right (or up and down) to be switched in her visual field (Stratton 1897, Kohler 1951 and Taylor 1962). The subjects in these experiments at first fail to integrate their perceptual stimuli and experience a period of confusion. In a second stage, they slowly relearn how to operate with these stimuli and come to entertain episodes of conscious perception as if their vision was not mediated by inverted lenses at all. Finally, when the lenses are removed, they undergo a period of confusion similar to the one at the first stage and have to relearn once again how to operate with their perceptual stimuli. The best explanation of what happens in these cases is that the subject is partially blind due to the 'inability to integrate sensory stimulation with patterns of movement and thought' (Noë 2004, 4), which is exactly what enactivism predicts.

As for indirect support, competing views fail to explain cases of *change blindness*, where an individual does not consciously perceive changes that happen in her perceptual field (see Noë 2004, 51-4, idem 2012, 93). This argument depends on the uncontentious premise that the environment we inhabit is heavily detailed. If our perception were pictorial, in the sense that it would register all the details available in a single 'mental scene', then changes in the details of the environment would cause changes in perception. But this is not what happens. Experiments show we are prone to fail to perceive significant changes within our perceptual field if our focus is elsewhere (O'Reagan et al. 2000). Of course, one might attempt to defend a representational view by claiming that what is needed in order to register such changes is representations *plus* focus or attention, but then one would have the burden of explaining how focus or attention work without appealing to embodied or enactivist claims. The enactivist, on the other hand, can claim that one's focus or attention is essentially, but not exclusively, a function of one's bodily abilities. Take for instance the saccades, the eye movements one is able to perform. This kind of movement enables one to obtain information about one's

[19] I am thankful to Paulo Faria and Jonadas Techio for calling my attention to that last point.

environment, and even if something else is needed, there is an irreducible role played by embodied abilities. Hence, the phenomenon of change blindness shows that 'we don't make use of detailed internal models of the scene.' (Noë 2004, 52). In order to entertain states of conscious perception, then, we have to navigate through the environment, and this can only be done by the exercise of our embodied abilities: from saccades to movements of the whole body, thus registering the motor contingencies and the invariant aspects of the environment[20].

In relation to our previous discussion about epistemological disjunctivism, it is important to note that, according to Noë's enactivism, perceptual consciousness is an *embodied achievement* – it necessarily involves an interaction with the environment, as the epistemological disjunctivist herself claims (see Noë 2012, 63-7 for this same point). The achievement of a perceptual state is analogous to the *factivity* of perceptual knowledge-that on the epistemological disjunctivist's account. Finally, such achievement requires the effective exercise of certain abilities that are not strictly intellectual, such as the ability to move one's own body in order to access what is available. Here is Noë on the matter:

> [...] *Conscious reference* is, in general, an achievement of the understanding. To see something – that is, for something to show up for one in conscious visual experience – or to refer in thought to something – that is, for it to show up in one's conscious thoughts – is a matter of skillful access to the thing. [...] Conscious reference is a relation between a skillful person and a really existing thing. Where there is no really existing thing there can be no access or genuine availability; at most there can be the illusion of such. But the mere existence of the intentional object is not sufficient to guarantee that our thought or experience can involve it; for thought or experience to involve the object, the perceiver must be comprehending. (Noë, 2012, 27)

As Noë himself notices (2012, 69), this view bears some resemblance to conceptualism about perceptual experience, because experience is not *given*, instead it is mediated by one's understanding – in this case, *practical understanding*. Practical understanding or sensorimotor abilities play a role analogous to the one played by concepts in the conceptualist view we mentioned in §1.7. Unless we are willing to stretch the very idea of *conceptual capacities* in order to encompass sensorimotor abilities (which indeed is Noë's (2015) view on the matter), enactivism does not amount to conceptualism. Note that an enactivist approach to conceptual content seems to imply the rejection of Evans' Generality Constraint (Evans 1984, 75),

[20] Following Rowlands we can classify embodied abilities in three 'partially overlapping kinds: (i) saccadic eye movements, (ii) probing and explanatory activities involved in the identification of sensorimotor contingencies and (iii) manipulation and exploitation of the optic array'. (2010, 202)

according to which an individual possessing conceptual capacities would be capable of generating a potentially infinite number of thoughts by redeploying the same concepts. The reason for the rejection of the Generality Constraint is that, on the enactivist view, exercises of an individual's abilities are constrained by the environment she inhabits and could not be infinitely reproducible. To put it shortly, perception is fundamentally situated, while concepts are general.

Now, the view that our experience is constituted by the exercise of our sensorimotor abilities to access the world is directly relevant to our present puzzle, because it offers a plausible explanation of the difference in kind between waking and dreaming experiences – thus justifying phenomenological disjunctivism. The idea here is that our dreaming experiences are not the result of an exercise of our sensorimotor abilities. (Nevertheless it is quite plausible that a different set of abilities is necessary for dreaming, which would explain the possibility of lucid dreaming and the reports of some people, plausibly those lacking the required abilities, who claim that they do not dream.) That in turn explains why our experience is richer and significantly more consistent in actual perception than in dreaming: when we are awaken, we navigate through our environment and access the available information, while in dreaming there is no movement and practical understanding involved – at least not like in actual perception where motor information is carried out from the body to the environment and brought back through the senses. When one is dreaming, even if one's body is unconsciously engaged in motor exercises, there is no sensory feedback in order to adjust one's motor reactions. Noë (2004, 214) draws a similar conclusion. He is not worried about dream skepticism in particular (indeed, he explicitly sets aside the question), but is concerned rather with answering the internalist objection that, if the exercise of sensorimotor abilities were necessary for perception, how could we explain dream states? The common ground here is of course the fact that there is no sensorimotor abilities fully involved in dreaming experiences. Noë's reply to the internalist objection consists in explaining that waking and dreaming experiences are radically different precisely because sensorimotor skills are absent in dreaming states.

Notably, the enactivist still have to offer a positive explanation of the similarities between perceiving and dreaming – even if those states are not phenomenologically identical, there is still something that makes them both fall under the concept of *experience*. One possible

explanation is to explore the differences in motor responses outlined above: basically, in dreaming, the impression of movement may be accompanied, to some degree, by actual motor behavior (minus, of course, the necessary adjustments enabled by sensory feedback). If that is the case, then we aggregate explanatory value to enactivism by broadening its scope of application. However, that claim would be insufficient to explain the characteristic imagery of dreams, for it explains only why those images are not as complex, consistent or detailed as actual perceptions. So in addition, the enactivist would have to explore the fact that a radical approach neither denies the existence of mental representations, nor is incompatible with positing mental representations in order to explain some higher-order cognitive processes (such as long-term memory, complex inferences and certain kinds of planning). A *hardcore* radical enactive approach would have to deny all that, but the resulting picture of the mind on this view would be literally a *no-brainer*. A (non-hardcore) radical enactive approach, instead, is committed to explaining *some* cognitive processes without positing mental representations, perception being the paradigmatic case. That being said, it is open to the radical enactivist (but not to the hardcore radical enactivist) to explain the similarities between dreaming and perceiving – which, I repeat, do not amount to phenomenological identity – by appealing to representations, possibly as deficient residues of actual perception. But it is beside the point to pursue this point further. Our main claim here is that the appeal to the exercise of sensorimotor abilities in explaining the phenomenology of conscious experience provides a plausible rationale for phenomenological disjunctivism (considering conscious experience and dream states).

I intend to have shown by the arguments above that D2 on the skeptical argument above is false, and, therefore, that the argument from D1, D2 to DC is not sound. Moreover, if epistemological disjunctivism is a stronger anti-skeptical thesis when understood as a variation of phenomenological disjunctivism, in this case, the one supported by enactivism; and if both enactivism and disjunctivism consistently explain the differences between perceptual states and deviant states – enactivism through a phenomenological route and disjunctivism through an epistemological one – then the explanation of these differences offered by the combination of the two accounts is more robust than the one offered by epistemological disjunctivism or by enactivism separately.

In the final two sections of this chapter, I intend to show that if one is willing to accept enactivism as the motivation for phenomenological disjunctivism in order to solve the skeptical puzzle based on the dream possibility, then epistemic immodesty – the apparently problematic consequence of epistemological disjunctivism and closure – is not really problematic at all, given a more inclusive notion of rationality suggested by an enactivist view. But first we will take a closer look at the putative relation between enactivism and idealism and at what it means to construe enactivism as an anti-skeptical thesis.

2.4. Enactivism and Idealism?

It might be tempting to construe the emphasis put on the *activities* performed by the subject as a source of epistemological idealism. If we take epistemological idealism to be the view that the individual makes substantive contributions to the acquisition of knowledge, it does follow that enactivism entails epistemological idealism. That characterization, however, is trivially true – after all, the knowledge we are able to attain is, both in kind and extension, always dependent upon our cognitive apparatuses and our exercise thereof – so it does not capture what is distinctive about idealism. What epistemological idealists claim is that the very content of one's knowledge, *what is to be known*, is constituted by one's cognitive activities. Epistemological realists, on this way of construing the opposition between the two factions, would not commit to the idea that knowledge is absolutely passive, but only to the idea that what is to be known is out there to be discovered, independently of the existence of a knowing subject[21].

Even with this more robust characterization of idealism in mind, it still seems to follow that enactivism entails epistemological idealism, given that we presented a constitutive claim, namely: that an individual's perceptual states are constituted by the exercise of her sensorimotor abilities. Given that perception is either a source or a kind of knowledge (depending on whether we adopt a traditional epistemology or a knowledge-first approach), it

[21] In the seminal work on embodied mind by Varela, Thompson and Rosch (1991), the treatment received by some topics suggests an idealist position, despite their efforts eschew the opposition between idealism and realism. Consider some of their claims on color perception: 'we will not be able to explain color if we seek to locate it in a world independent of our perceptual capacities. Instead, we must locate color in the perceived or experiential world that is brought forth from our history of structural coupling' (165) and 'color provides a paradigm of a cognitive domain that is neither pregiven nor represented but rather experiential and enacted' (171). As Shapiro (2011) points out, however, the arguments in favor of those claims can only show that different cognitive systems perceive the world differently.

does follow that one's knowledge is constituted by the exercise of one's sensorimotor abilities, which is a cognitive activity. As always, however, the devil is in the details, for it all depends on how we understand 'constitution' in this context. In one sense, it means that the object of knowledge is the very exercise of embodied abilities. This, would indeed be a bold claim, for it implies that the world is built in the act of being perceived. In another sense, it means only that the exercise of sensorimotor abilities uncovers or enables the apprehension of the world, and that these activities are not merely causal, but also cognitive. So conceived, the constitution thesis defended here is far from entailing idealism. Instead, it is straightforwardly consistent with the realist conception of an independently existing world out there to be known – and, by way of clarification, it is that latter sense that I have in mind when I advanced a constitution thesis.

The two different senses of 'constitutive' mark the difference between, on the one hand, an idealist view according to which our cognitive activities build the world in the act of apprehending it and, on the other, a neutral claim regarding idealism and realism, maybe even a commonsensical one: that our cognitive activities enable us to apprehend the world. Commenting specifically about sensorimotor activities, Rowlands writes:

> These probing, exploratory activities are not, typically, thing *of* which we are aware when we visually experience the world: they are things *with* which we visually experience the world (…) That is, these activities are among the vehicles of causal disclosure of the world; part of the means by which, in the case of vision, our intentional directedness toward the world is achieved or effected (2010, 205).

The point is applicable to embodied abilities more generally (including also saccadic movement and manipulations of optic array). Therefore, it is clear that, by emphasizing the role of activity in perception, we do not end up with an idealist position. Moreover, it should be clear that we never intended to eschew the role of *passivity* in perception – i.e., that our cognitive apparatuses must somehow be affected in order to register the relevant aspects of the environment. What we claimed is that perception cannot be entirely passive, it involves, in a constitutive manner, active exploration of the environment. This is what enables the affection of our cognitive apparatuses in the right way in order to attain a full blown perceptual state. We have never claimed – and I think it would be absurd to do so – that this exploration itself is the very content of our perceptual knowledge, because, to borrow from

Rowlands once again, the exercise of our sensorimotor abilities is part of the means by which we perceive the world, not the very intentional object of the perception.

2.5. Enactivism as an Anti-Skeptical Thesis

One could object that enactivism is unable to properly motivate a response to the dream skeptical argument because it is an empirical thesis. This is a controversial claim, for enactivism is intended to be an account of our perceptual experience – and, although it does enjoy empirical support (both direct and indirect), it is unclear whether describing our perceptual experience by appealing to our bodily skills is question-begging. After all, enactivism seems to be an accurate account because we *are* embodied creatures, and supposing from the beginning that the only appropriate kind of answer to the skeptic has to do without our bodies and to depend exclusively on internal representations amounts to a gratuitous shift of the burden of proof.

However, in order to answer this objection, we may concede that enactivism is empirically motivated, but that does not undermine our overall strategy. We are assuming the correctness of epistemological disjunctivism and trying to avoid construing the consequence that we can have rationally grounded knowledge of the denials of radical skeptical hypotheses as a case of epistemic immodesty. The core disjunctivist idea is that perception yields a factive rational basis for believing and that non-perceptual states do not have the same epistemic status as perception. That allows us to block the skeptical argument according to which we are not justified in relying on our perceptual states, because they would have the same epistemic status as deceptive states, and thus would not yield knowledge. So if epistemological disjunctivism is correct, we are justified to take our perceptual states as sources of knowledge if we find ourselves in appropriate objective, subjective and in-between circumstances. Among those perceptual states are the ones that support enactivism, such as observations of our own experience and the relation it holds with our sensorimotor abilities and the empirical evidence for enactivism.

There is a condition, however, that must be satisfied for epistemological disjunctivism to allow us to rely on an empirically based claim, viz.: that there are no reasonably well-motivated possibilities of mistake. If any such possibility is in the vicinity, we do not find ourselves in good epistemic circumstances and should withhold our judgements concerning

our perceptual states. Here one might take the skeptic's point as fundamental and argue that, given the dream possibility, we have to prove beforehand that we can acquire rationally grounded knowledge that we are not dreaming. This strategy could be properly said to be a *refutation* of the skeptical argument, and it does not seem like it can be done with anything less than a transcendental argument. I suggest a more cautious stance: there is no prior reason to suppose that the skeptic's point is more fundamental than common sense. Therefore, instead of refuting the skeptic, we aim at explaining what is wrong with the skeptical argument by appealing to a commonsensical view according to which we have plenty of knowledge. As we emphasized at the beginning of the previous chapter, according to this strategy, skeptical arguments are taken to be paradoxes, for they are constituted by *prima facie* plausible premises which entail unacceptable consequences. The strategy deployed here consists in *explaining why* a premise of the skeptical argument is merely apparently plausible, but is actually misleading and should be rejected[22]. This process is epistemologically relevant not only because it shows where exactly the skeptical argument goes astray, but also because it exposes features of our cognition that, if ignored, lead to unappealing consequences. Specifically in the case of the dream skeptical argument we saw in §2.2, we rejected the premise D2, according to which one cannot acquire rationally grounded discriminative knowledge that one is not dreaming: D2 is not only unjustified but also false.

2.6. Embodied Rationality

Let us recall that epistemological disjunctivism is the thesis that perception is a rational factive basis for holding beliefs about the external world. If I know perceptually that *p*, and if the rational basis for my perceptual belief transfers across the known entailment that I am not a brain in a vat, then I am able to acquire the rationally grounded knowledge that I am not a brain in a vat. This result is what Pritchard calls *epistemic immodesty*, and it does seem to be too strong a consequence. That is so because usually when talking about rationality – hence about rationally grounded knowledge – philosophers have in mind something as the possession of reasons that entail or non-deductively support the target belief. Ideally, those reasons can be articulated and brought about by a rational individual with the relevant conceptual skills when she is questioned. Let us call this the *narrow conception of rationality*,

[22] This is why the specific strategy I endorse is close to the one Pritchard calls 'undercutting' anti-skeptical strategy (Pritchard, 2012), for it aims not to reply to the skeptic, but to diagnose what is wrong with her argument.

because it demands that the individual whose rationality we are assessing possess a set of sophisticated cognitive skills. It follows that small children and non–human animals are nonrational for they do not fit this normative framework.

It is something along such lines that Pritchard has in mind when he says that disjunctivism, as a philosophical position, enables us to have rationally grounded knowledge of mundane propositions (although he is not explicit about it). And this would be, indeed, one of the biggest gains of assuming a disjunctivist position: the *fact* that one perceives that *p* is the *rational* source of one's belief that *p*, which amounts to knowledge and entails *p* in appropriate conditions. There is nothing mysterious in citing this fact as the rational source of belief formation: 'I know because I see it'. However, *on this view of rationality*, it certainly sounds odd to say that any perceived fact is a rational basis for denying a radical skeptical hypothesis, given that individuals in skeptical scenarios and in non-skeptical cases (like the real world) would seem to share the same phenomenological states and could reason in the exact same way. However, enactivism enables us to reject this premise, for individuals in skeptical scenarios – as these are traditionally conceived – trivially *do not enact their perceptual content*. A brain in a vat has no body to exercise its sensorimotor abilities and thus lacks perceptual experiences altogether – as a radical disjunctivist would certainly predict. But what does this tell us about rationality? The view I am proposing here is that entertaining a perceptual state is a rational basis of belief formation not because we can cite the fact that *p* as the source and justification of the relevant belief, but because to perceive is a form of *achievement*, particularly, an embodied achievement. It is with this account of rational cognition as achievement in mind that I suggest the following general definition of rationality, call it the *embodied rationality thesis*:

S is a rational agent iff S is able to achieve a specific goal through the exercise of the relevant abilities in suitable conditions.

A perceptually conscious agent is rational, according to this view, because she arrives at a perceptual state (and forms the corresponding beliefs) through the exercise of her sensorimotor abilities in her interaction with the environment in appropriate objective, subjective and in-between circumstances. Note that the ability to achieve a specific goal is dispositional and it implies some sort of stability, so it has to cover a large class of cases, for

rational procedures are not compatible with lucky achievements. One can cash out this notion in modal terms: an agent is able to achieve a specific goal if she achieves the same goal in most or all nearby possible worlds wherein she exercises the same abilities with the same end (this is what we mean by the inherent stability of abilities in general). Hence, we would not be inclined to ascribe rational agency to someone that successfully does something in an isolated occurrence, which would be otherwise unsuccessful in a slightly different scenario. Secondly, the notion of *relevant* ability is intentionally vague, for the capacity to overcome shortcomings in which the specific abilities are not available (or could not be properly exercised) is quite intuitively a distinctive aspect of rational individuals[23].

We are therefore able to see that the embodied rationality thesis is broader than the narrow notion mentioned above for two reasons. Firstly, it covers paradigmatic cases both of epistemic and of practical rationality. Note that if perception fundamentally depends on sensori*motor* abilities, then the distinction between practical and epistemic rationality becomes somewhat blurred when it comes to perception as a source of rationally grounded knowledge[24]. Therefore, it is an advantage of the embodied view of rationality that it does not draw a sharp boundary between epistemic and practical rationality. Secondly, this view is consistent with the idea, which is central to the narrow conception, that *if a belief has some sort of appropriate propositional support, it is rationally held*. For deductive and non-deductive justification certainly are cases of achievement of specific goals (deductively demonstrated belief or inductively justified belief[25]) through the exercise of the relevant abilities (inferential abilities, recognition of inferential patterns, sensitivity to reason and to new evidences) in suitable conditions (Gettier-style cases and skeptical scenarios aside). What the embodied rationality thesis explicitly rejects is that, *if a belief is rationally held, then it enjoys some sort of appropriate propositional support*. The reason for that is that now we can appreciate other forms of rationality in a more inclusive normative view, for non-human

[23] Variety and creativity in problem-solving strategies is fundamental for most conceptions of intelligence as well - see Cianciolo & Sternberg (2004), mainly Sternberg's notion of successful intelligence (1995) -, plausible because intelligence and rationality are closely related. Of course, one could claim that intelligence does not imply rationality (a crow, for instance, can be perfectly able to solve a complex puzzle without being rational). But then again, this is simply the restatement of the narrow conception, for what is acting as the motivation for the distinction between intelligence and rationality is plausible the use of language, the ability to hold coherent beliefs, etc.

[24] Note that the appeal to an enactivist theory of perceptual knowledge is not sufficient to entail that *all* knowledge-that is a kind of knowledge-how (or depends on practical understanding) – such as the view defended by Hetherington (2011).

[25] For simplicity, I am supposing here that abductive inferences are a subclass of inductive inferences.

animals and small children are also able to successfully engage with their environment, with different abilities and different degrees of success (something that is corroborated by an evolutionary view) and sometimes form beliefs correspondingly[26].

Now, we distinguished two conditionals, both of which are central to the narrow notion of rationality: (i) *if a belief has some sort of appropriate propositional support, it is rationally held*, and (ii) *if a belief is rationally held, then it enjoys some sort of appropriate propositional support*. What could be the rationales behind those conditionals?

Certainly the idea behind (i) is that of truth-conduciveness, for deductively valid inferences are truth preserving and inductively good inferences enhance the chances of their conclusions being true. But note that *being true* is not the main aspect of the rationale for (i), for a belief can be accidentally true and thereby fail to qualify as a rationally held belief. What is important here is the idea of *achieving* true beliefs through certain methods or procedures (specifically, in this case, deductive and non-deductive reasoning), and that is why (i) is part and parcel of the embodied notion of rationality.

As for (ii), its rationale seems to rest in a confusion between, on the one hand, the act of making explicit the rational support a belief might have and, on the other, the rational status an agent might have independently of such an act. This confusion arises in a similar manner when the topic is epistemic justification, as noticed by Alston (1988a) – for focusing on our practices of giving reasons and responding to challenges inevitably leads us to the idea that only beliefs justify other beliefs. That is so because, if we partake in the dialogical game of giving and asking for justifications, we have to explicitly articulate them as propositions which we endorse. Similarly, we can focus on whether a propositional attitude is rational, given an available procedure to arrive at that attitude *or* we can focus on whether an individual is rational in having that attitude, given certain behavior that is explanatory of her attitude. The former forces a constraint of propositionality upon our view of rationality – hence the narrow conception – while the later allows us to say that an individual is rational by achieving certain goals through specific abilities. I find no independent reason to choose the

[26] Of course, that is not to say that humans and non-human animals share the same *basic* form of access to the world. On the contrary, the view we are advocating here ensures that individuals possessing different abilities engage with the world differently, and thus instantiate different forms of rationality. More on that on chapter 4.

first view, which entails (ii), instead of the second – unless one is supposing from the start that any broad notion of rationality is false.

Note, in particular, that this take on rationality is fit to comply with the internalist motif we mentioned in the previous chapter as part of the motivation for epistemological disjunctivism. Remember that the epistemic position a perceiving individual is in must be explained by the fact accessed by her. So, for an individual to access a fact through perception, on the embodied notion of rationality, she has to achieving that specific goal through the exercise of her sensorimotor abilities, and that is something *she does* – and, to this extent, it is both sufficiently *internal* and constrained by her rational capacities. Clearly, however, this view is not committed to the stronger internalist claim that whenever an individual accesses a fact through perception, she has immediate, reflexive access to her own epistemic position. But, as I argued in §1.7, this is not what epistemological disjunctivism is about. Importantly, this sort of immediate, reflexive access *could* be attained on the present view, but it is secondary to the success in achieving a perceptual state.

Before moving on to epistemic immodesty, it is important to distinguish what I have been calling here an embodied view of rationality from what Millikan (2009) called 'embedded rationality', a view independently explored by Faria (2009) as well. Both agree that there is no a priori or exclusively reflective method of determining the referent of a particular thought about the world, for the content of that kind of thought is at least partially dependent upon the environment one inhabits. From that, Millikan rightly concludes that:

> […] Ultimately, that an empirical concept is not prey to ambiguities is known to one only a posteriori; that one's mediate inferences are valid is known in the same way. One's rationality depends at every point on the complex causal and informational structure of the empirical world. (2009, 181)

She then rejects the widespread view that 'being rational is something you do in your head' (172). By the same token, Faria argues that it is an empirical assumption that the contents of one's thoughts, in the course of an inference, are held constant – for changes in the environment may affect what one is thinking about without one's knowledge of it, at the very least in the case of indexicals. Therefore, the soundness of one's reasoning is not something to be determined a priori, and if one is rational only insofar as one is able to perform (and

recognize) sound inferences, then being rational is not something one can secure a priori (Faria goes a step further than most content externalists and argues that, in real world scenarios, unlike Twin Earth cases, it is often up to us to make sure what we are thinking about, so failures of rationality are often cases of inexcusable ignorance).

Now, I do not intend to assess the cogency and the merits of such arguments. Both accept some version of content externalism, and my position is intended to be neutral about the nature of mental content and the internal-external divide. It does seem plausible that inferential rationality is essentially embedded in one's environment and abilities and so on, but what I do want to highlight is that both views assume, alongside with the inherited tradition, that rationality is an ability to *perform sound inferences*. They remain silent on the possibility of adopting a broader view of rationality that includes, but is not restricted to, the embodied abilities to successfully engage in a non-inferential manner with the environment.

2.7. Epistemic Immodesty

Recall that epistemic immodesty – the idea that one can acquire rationally grounded knowledge that one is not in a skeptical scenario – is a seemingly unappealing consequence of epistemological disjunctivism conjoined with the closure principle for rationally grounded knowledge. The distinction between favoring and discriminating epistemic grounds does not ease the discomfort, for even the possibility of acquiring non-discriminative rationally grounded knowledge that one is not in a skeptical scenario seems to be too strong. Pritchard's attempt to solve this puzzle is inspired by some of Wittgenstein's (1969) remarks on our epistemic practices, according to which all rational evaluations are local, viz., a rational evaluation can only occur within a fixed framework. Consequently, the propositions that constitute that framework cannot be assessed in that rational inquiry. More to the point, according to Pritchard we cannot rationally evaluate the denials of skeptical hypotheses, because propositions, like 'I am not a brain in a vat', codify or express our *hinge commitments*, which are 'visceral commitments on our part, commitments that must be in place in order to create the rational arena in which rational evaluations function' (2016, 175). If this is the case, then hinge commitments cannot constitute (or be translated to, or be codified by) beliefs, for beliefs are essentially open to rational evaluation. *A fortiori*, they

cannot qualify as knowledgeable propositions[27]. On this view, one cannot even *form* the belief (let alone a bona fide knowledge candidate) that one is not a brain in a vat on the ground that one perceives something to be the case, even if one's perception is factive and rationally grounded. The closure principle for rationally grounded knowledge, then, would not apply to this sort of case.

Aside from creating an exception to the relevant closure principle, what may sound puzzling about Pritchard's strategy is that it seems entirely possible to believe that one is not a victim in a skeptical scenario. In order to accommodate this appearance, Pritchard has to deny that the phenomenology of our mental states is a privileged way of determining their nature. He writes:

> This [hinge] commitment may feel like belief to the person concerned, in that its phenomenology may be identical to other, more mundane, beliefs that the subject holds. But the import of this point is moot once we remember that the phenomenology of a propositional attitude does not suffice to determine what propositional attitude is in play (2016, 102).

Pritchard then offers the example of wishful thinking as a justification for the claim that the phenomenology of our mental states is not a reliable indicator of their nature. Note, however, that wishful thinking is not a standard case, unlike believing, which would explain why an individual who thinks wishfully has a propensity to fail to identify the nature of her mental state. Moreover, Pritchard is here advocating some sort of phenomenological conjunctivism, which would bring us back to dream skepticism (in particular, our solution to the dream skeptical argument, which consists in rejecting D2, would not be available). The advantage of the embodied view of rationality on this matter is that it offers a less onerous solution to the apparent problem of epistemic immodesty – and it is also Wittgensteinian in spirit (although I am not interested in presenting a faithful exegesis here).

The idea is that the attitudes concerning the propositions that codify our hinge commitments – such as 'here is a hand' – do not come for free. They are not the goal of a rational evaluation, in the sense that they could not enjoy rational support narrowly conceived (at least in most normal circumstances). But they are reached by the way we engage with the world, which is

[27] Pritchard is careful to distinguish the view that hinge commitments cannot constitute (or be translated to, or be codified by) beliefs from the stronger thesis that hinge commitments are not *propositional*. One contender for the later view is Moyal-Sharrock (2004).

explained by our sensorimotor abilities. Our attitudes concerning these propositions are then, in light of the embodied rationality thesis, rational. The same applies to the denials of radical skeptical hypotheses: we form beliefs in the denials of radical skeptical possibilities based on the successful exercise of our sensorimotor abilities: it is because we are successfully interacting with the world that we believe we are not brains in vats, for instance. Since beliefs like these are achieved through the exercise of our relevant abilities in suitable conditions, we are rational in believing that we are not victims in skeptical scenarios. Furthermore, given epistemological disjunctivism, our perception in the appropriate objective, subjective and in-between circumstances is factive – it follows that the beliefs in the denials of radical skeptical hypotheses constitute rationally grounded knowledge.[28]

This point is on a par with some of Wittgenstein's (1969) passages that show a struggle with the finding that rational evaluations are dependent upon something that is not open to rational evaluation itself, namely our most fundamental practices:

> Giving grounds, however, justifying the evidence, comes to an end;-but the end is not certain propositions' striking us immediately as true, i.e. it is not a kind of seeing on our part; it is our *acting*, which lies at the bottom of the language-game. (§204, my emphasis)
>
> [...] As if giving grounds did not come to an end sometime. But the end is not an ungrounded presupposition: it is an ungrounded *way of acting*. (§110, my emphasis).[29]

That our epistemic practices of 'giving grounds' are based on 'an ungrounded way of acting' is a way of expressing the locality of our rational evaluations, for we cannot adduce reasons in support of our most fundamental presuppositions, our hinge commitments. But it does not follow from this fact that 'our acting' is irrational, not as long as one conceives of rationality as something embodied. Epistemic immodesty, then, is not a problem on this view because we cannot but act the way we do, viz., by engaging with the world through the cognitive apparatus we are endowed with. This consequence is best understood not as a matter of *immodesty*, but as a depiction of our constitution as cognitive agents. This is also obliquely contemplated by Wittgenstein for, although it is a contingent matter *which* hinge

[28] As we discussed in §1.3, the claim I am advancing here is bolder than the idea that we are pragmatically entitled to accept that we are not victims in skeptical scenarios.
[29] See also §§148, 232 and 342.

commitments we hold fast to in order for our rational evaluations to be possible, that *some need to stay put* is not contingent[30]:

> But it isn't that the situation is like this: We just *can't* investigate everything, and for that reason we are forced to rest with the assumption. If I want the door to turn, the hinges must stay put (§343)[31].

2.8. Concluding Remarks

The suggestion that rationality is not something purely intellectual and unconstrained by our worldly actions arises naturally from the sort of enactivist account of perception I proposed as a response to the dream argument. This view then allows us to say that epistemic immodesty is not a problematic consequence of epistemological disjunctivism and closure for rationally grounded knowledge, because it is not problematic at all. But it also has a consequence that seems to be counterintuitive or straightforwardly unacceptable: that individuals in skeptical scenarios do not engage with the world – by the most intuitive way to construe such scenarios – and cannot, therefore, be said to be rational if we accept the embodied view of rationality. They fail systematically, thereby achieving nothing. Nonetheless, it seems that we can imagine the victims in skeptical scenarios as epistemically responsible beings, at least as able to avoid inferential pitfalls – which is something cardinal to any intuitive notion of rationality. It seems, therefore, that (radical) enactivism has a bitter pill to swallow – but, as I will argue in the fourth chapter, the pill is rather bittersweet. First, however, there is a residual problem we must face. If we accept the arguments in favor of the radical enactive approach to perception, we must take perceptual states to be achieved through one's actions – and, to the extent that such actions are not explained by appealing to representational or conceptual abilities, but to sensorimotor abilities – there remains a sizeable gap between the enactive approach and epistemological disjunctivism, for the latter is a thesis about perceptual knowledge-*that*. This is the problem we will discuss at a greater length in the next chapter, where I will explain how perceptual knowledge-where, -when and -how is more fundamental than perceptual knowledge-that. This being the case, our perceptual states are rationally

[30] Wittgenstein addresses the fact that there is not sharp and definitive distinction between our hinge commitments and the rest of our rational evaluations with the riverbed metaphor (§§96-99).
[31] See also §§152 and 235.

grounded because they are achieved by the exercise of our sensorimotor abilities, and the more complex state of perceptually knowing-that is derivative of the other kinds of perceptual states.

3. Contentless Basic Minds and Perceptual Knowledge

Abstract

Assuming a radical stance on embodied cognition, according to which the information acquired through basic cognitive processes is not contentful (Hutto and Myin, 2013), and assuming that perception is a source of rationally grounded knowledge (Pritchard 2012), a pluralistic account of perceptual knowledge is developed. It is explained (i) how the varieties of perceptual knowledge fall under the same broader category, (ii) how they are subject to the same kind of normative constraints, (iii) why there could not be a conflict between the different varieties of perceptual knowledge, and (iv) how the traditional epistemological inquiry overestimates the role of propositional perceptual knowledge.

3.1. Radically Embodied Cognition

The main claim of embodied views of cognition is that cognition cuts across brain, bodily actions and the environment. Hurley (2001), for instance, holds that cognitive processes are horizontally modular in structure and involve internal states, the body and the environment, with input and output in feedback loops. On this view, action and perception are constitutive of one another – thus implying the *enactive* approach –, and cognition emerges from a cycle of action-perception-action. This implies the rejection of a hierarchy (vertically modular in structure) from perception to cognition to intentional action. Likewise, as we have seen, Noë (2004, 2012) argues that perception is constituted by one's actions in the environment, specifically the actions that manifest practical understanding in the exercise of sensorimotor abilities. A philosophical advantage of construing cognition in embodied and enactive terms is the resulting phenomenological and epistemological differences between genuine perceptual states and deviant states (such as hallucinations and illusions). In deviant states, one is either not interacting with the environment at all or one's actions are not what would be expected if the circumstances were normal – thus failing short of achieving a perceptual state. Embodied cognition, therefore, offers a welcomed dissolution of an otherwise enduring skeptical anxiety, viz.: if we were in a radical skeptical scenario, we would entertain the same perceptual states as we do in non-skeptical scenarios and yet we would fail to cognitively

reach out to the world. This cannot be so according to embodied cognition: brains in vats simply could not cognize the same way we do.

Despite that advantage, the usual objection leveled against embodied views of cognition is tht they erroneously take what are mere causal factors (one's activity in the environment) as constitutive of the relevant cognitive processes, which are, according to some critics, exclusively brain-bound. The point made by Adams & Aziwa (2001, 2010) and echoed by Prinz (2009) is that to say that bodily actions and the environment are *causally relevant* for a perceptual state is borderline trivial and hardly informative, whereas the more contentious claim that bodily actions and the environment are *constitutive* of a perceptual state is unmotivated. For if I am to turn my head to the right I certainly acquire a new perceptual state *because* I moved my head and deployed a set of muscles and part of my sensorimotor system in doing so, but this is clearly contingent in relation to my perceptual content (for someone could have shifted my chair). Therefore, my newly acquired perceptual state is only causally dependent upon my bodily actions in this specific environment.

In response, Hutto and Myin (2013) argue that the appeal to a distinction between cognitive processes properly conceived and merely causal or external features is question begging. That strategy, they claim, assumes that there is a principled way of distinguishing cognitive processes from causally relevant factors, which in turn hinges upon the idea that cognition is contentful whereas causal or external events are not intrinsically contentful. They propose REC (Radically Enactive Cognition), the view that basic minds are contentless: although some higher mental processes are characterized by vehicles carrying contentful information, there is a non-empty class of contentless processes which constitute our fundamental interactions with the environment. These basic processes are explained by one's actions, and the information they convey is explained in terms of the scientifically respectable notion of *information as covariance*. On that account, a certain state of affairs carries information about some other states of affairs if and only if 'the occurrences of these states of affairs covary lawfully or reliably enough' (Hutto & Myin 2013, 66). A more onerous notion of contentful information holds that information *says something about something else* – therefore, on the later notion, information has semantic and syntactic properties. They write:

> [...] it is important to distinguish the notion of information-as-covariance from its richer cousin semantic or intentional information—the kind of

> contentful information (the message) that some communications convey. [...] Call this information-as-content. Naturalistic theories with explanatory ambitions cannot simply help themselves to the notion of information-as-content, since that would be to presuppose rather than explain the existence of semantic or contentful properties. (Hutto & Myin, 2013, 67)

The target of their criticism is the widespread assumption that the ascription of contentful information is necessary for cognition; in other words, that all cognitive acts are either representationally or conceptually articulated[32]. The fundamental problem with the views that fall under what they call CIC (Cognition (necessarily) Involves Content) theories is the challenge of offering a naturalistic explanation of contentful basic minds, whereas contentless basic minds can be modelled and are philosophically sound[33]. CIC theories with naturalistic constraints, therefore, face the following dilemma: they can either give up on the ubiquity of contentful information in cognition – thus opening the way to radical enactivism – or aim to reduce information-as-content to information-as-covariance. At this latter horn of the dilemma, the proponents of CIC face the Hard Problem of Content for the covariance we find in physical states does not have, by itself, semantic and syntactic properties. As Ramsey puts it:

> […] the sort of roles we ordinarily associate with representation are not easily cashed out in causal-physical terms. When we think of representations, we think of things that perform tasks like "standing for something else" or "informing" or "signifying" and such. Yet, it is far from clear just how these sorts of tasks could be implemented in a purely physical system. (Ramsey 2015, 2)

It follows that, if one opts for a naturalistic explanation of cognition that necessarily involves (representational or conceptual) content, one ultimately finds an explanatory gap between covariance and content[34]. Therefore, the argument that cognition is not to be confused with causally relevant factors (because it necessarily involves content) does not undermine the

[32] Hutto and Myin's argument is also aimed at what they call CEC (Conservative Embodied Cognition) theories, according to which cognition necessarily involves *coupled* or *action oriented* representations that bound an individual to an environment, such as the theories developed by Millikan (1995) and Clark (1997).

[33] See Chemero (2009) for the discussion of several models of cognition without representations explained by dynamical systems theory.

[34] One could, of course, follow the conceptualist path and take nature to be conceptually articulated (as John McDowell, 1994, does for instance), but one then would (i) give up naturalistic constraints and (ii) risk over-intellectualizing cognition, implying that many animals that seem to be able to perform cognitive tasks would either possess concepts that we do not usually ascribe to them or not be actually performing the cognitive tasks in question but only behaving in a predictable way. One could adapt conceptualism by offering a different account of concepts, but this is also problematic - more on this §3.2 below.

embodied stance insofar as that argument only assumes, but fails to explain according to the naturalistic framework, the notion of contentful information.

3.2. Contentless Knowledge?

If Hutto and Myin's criticisms are correct, it follows that basic cognitive processes such as perception are not intrinsically representational or conceptual because they trade upon information as covariance. Perception, therefore, is not open to the assessment of its accuracy or inaccuracy, its truth or falsity, because: "[...] the biologically basic modes of organismic responding don't involve content, where content is understood in terms of either reference, truth, or accuracy" (Hutto & Myin, 2013, 78). And:

> A truly radical enactivism—REC—holds that it is possible to explain a creature's capacity to perceive, keep track of, and act appropriately with respect to some object or property without positing internal structures that function to represent, refer to, or stand for the object or property in question. Our basic ways of responding to worldly offerings are not semantically contentful. (idem, 82)

Assuming that perceptual experience is a case of contentless basic mind, the following problem arises: how can a contentless process generate perceptual *knowledge*? It seems that we cannot have it both ways, because perceptual knowledge is usually taken to be essentially contentful. Clearly, the underlying supposition is that perceptual knowledge is conceived exclusively as *knowledge-that*, but even if we eschew this supposition and follow a Rylean line – hence offering a non-reductionist account of other forms of perceptual knowledge, such as knowledge-how/where/when – we have to face some challenges, viz: explaining (i) why the varieties of perceptual knowledge fall under the same broader category, (ii) whether they are subject to the same kind of normative constraints, (iii) whether there could be a conflict between the non-propositional and the propositional varieties of perceptual knowledge, and (iv) why perceptual knowledge is not the way that traditional approaches usually take it to be, namely, as abounding propositional knowledge. These challenges are especially important given our goal of explaining the relation between perceptual knowledge-that, which arises from the epistemological disjunctivist account, and other forms of perceptual knowledge which are essentially embodied.

Before attempting to answer these questions in the framework of a radically enactive approach, we can briefly outline two alternatives that do not sound as appealing: one the one hand, we could give up on the idea that basic minds are contentless and avoid the burden of explaining contentless perceptual knowledge. This, however, would lead us back the objection raised by Prinz, Adams and Akiwa – and, failing to meet that challenge, one of the main philosophical gains of embodied views of cognition would lose its punch, namely, the explanation of the difference between perception and deviant states (as seen in §2.3). Moreover, this view would have the additional problem of explaining (or explaining away) intuitive cases of bona fide cognition that do not call for the ascription of content. On the other hand, we could retain the ideas that basic minds are contentless and that perception is a basic activity, and give up on the idea that perception yields perceptual knowledge, but this would be a ruthless revisionist approach to epistemology, as we saw in §1.1, for it would imply skepticism about perceptual knowledge – which is a high price to pay to avoid the problems at hand. I find both alternatives unconvincing, so I now turn to the challenges mentioned above in order to show that we can have contentless basic minds *and* perceptual knowledge.

3.3. Perceptual Knowledge-how/wh and Perceptual Knowledge-that

In order to show how the varieties of perceptual knowledge fall under the same category, we need to outline some conditions of perceptual knowledge-that. Firstly, it is uncontentious that knowledge-that is factive, that is, knowing that *p* implies *p*. As we saw, it is a core disjunctivist thesis that *perception* is factive, but here we are dealing with the less disputable claim that knowledge itself is factive – this is something that most, if not all epistemologists accept, even those who are not disjunctivists. Secondly, it is also widely accepted, since at least Gettier (1963) that knowledge-that is incompatible with luck. Among the epistemologies that aim to meet this requirement, the most successful one is the Safety Theory (Sosa 1999, Pritchard 2005), according to which one knows that *p* iff one could not be easily mistaken about *p*. This relation between the subject and the target proposition is usually construed as a modal one, so that in most or all nearby possible worlds in which the subject believes that *p*, *p* is true[35]. Obviously this is not enough, for there could be nearby possible worlds in which one

[35] Although this discussion here turns to be about beliefs rather than knowledge, it is also widely accepted that knowledge implies belief, in a way that knowledge-that implies a belief which is not true due to luck. This might

believes falsely that *p*, but which are irrelevant to the assessment of one's belief in the actual world. One such case was described by Pritchard (2005): a subject sees that his house is on fire – and plausibly knows that –, but could have easily believed in the false testimony of the village bully (in this alternative scenario, his house was not on fire but the bully told him so anyway). Clearly, the knowledge acquired by seeing that one's house is on fire is not tarnished by the fact that one could easily be mistaken about that. The key here is to distinguish the method of belief acquisition in both cases and use that in ordering the relevant nearby possible worlds in which the subject believes that *p*. So, one knows that *p* iff in most or all nearby possible worlds in which the subject believes that *p through the same method, p* is true. Finally, there must be direction of fit from belief to truth (Pritchard 2009): the individual must be able to adjust her beliefs in accordance with the relevant changes in the world – because we could conceive of a scenario where the world is adjusted in order to fit the beliefs of the individual (imagine a benign demon is in control). It seems that there would be something epistemically amiss with the subject in that case, plausibly because her true beliefs would come for free.

We outlined three aspects of perceptual knowledge-that: (i) factivity, (ii) the safety of belief acquisition given a fixed method and (iii) a direction of fit from subject to the world. Mutatis mutandis, all these aspects are met by the correct understanding of the embodied abilities relevant for non-propositional varieties of perceptual knowledge. (Obviously, the need for a propositional attitude is left beside in this brief overview, for it is the main difference between perceptual knowledge-that and the other forms of perceptual knowledge).

Firstly, as mentioned in §2.3, the analogue of factivity when we talk about embodied abilities is success in achieving a certain end. One is successful in achieving an end E by exercising an ability A if the exercise of A is causally relevant for the occurrence of E. For example, I am successful in locating a cup of coffee to my right by moving my head to the right – my ability in this case, moving my head to the right, is causally relevant for achieving the end of locating it. Obviously, more complex actions could be undertaken in a scenario like that, for example,

---

seem in contrast with another take on knowledge, such as the knowledge-first epistemology famously defended by Williamson (2000). What a knowledge-first epistemologist would deny is that the concept of knowledge is a complex concept analyzable into simpler ones, such as belief, truth and some further non-circular condition - but as Williamson is careful to notice, this does not mean that knowledge does not imply belief..

I am not only able to locate a cup of coffee, but also to pick it up and bring it to me. In this later case we have more steps and more modules of my perceptual system are involved in achieving the relevant ends. In neither case, however, we need to say that the relation between exercising A (or the intermediate actions A_1,..., A_n) and achieving E (or E_1,..., E_n) needs to be the object of propositional attitudes by the individual in order to guarantee success. Both cases are paradigmatic examples of *knowing where* – because I am able to locate the cup in the room –, but are also cases of *knowing when* – because I am able to track the cup through time –, and *knowing how* – because I perceive what kind of actions I am able to perform given the information I acquire from the cup, in this environment, and my actual bodily configuration and dispositions. In order to see the last point, note that, if I had a stiff neck I could be unable to turn my head to the right, but I would know how to (ceteris paribus) locate the cup by turning my torso around a bit more painfully. If my right arm was broken, I would have to exercise other parts of my sensory system to pick the cup, and so on.

There is some controversy, however, on whether possessing and exercising an ability in appropriate conditions implies success. Comparing abilities with dispositions, Chemero notices that:

> The problem with seeing abilities as dispositions is that when coupled with the right enabling conditions, dispositions are guaranteed to become manifest. The soluble solid sugar will always dissolve in water in suitable conditions. This is not true of abilities. Having the ability to walk does not mean that one will not fall down even in the ideal conditions for walking. This is to point out that there is something inherently normative about abilities. Individuals with abilities are supposed to behave in particular ways, and they may fail to do so. (2009, 145).

Although we do need to recognize the fallible character of cognition (in general), we do not need to locate fallibility between a properly exercised ability and the success in achieving a goal. If that was the case, the analogy with factivity would seem to be compromised, for abilities would not guarantee success. Alternatively, we can follow Millar (2011) and claim that in appropriate circumstances, the exercise of an ability is guaranteed to achieve the desired end. Therefore: 'the fallibility associated with recognitional abilities consists in not always exercising them when we aspire to do so, not in sometimes exercising them but failing to come to know' (Millar, 2011, 334). Although Millar is focusing on conceptual abilities and *knowing-that*, we can capture the gist of his idea in more general terms: one can be

unsuccessful by failing to properly exercise the relevant ability A, not by properly exercising A and even so failing to achieve E. This is connected with the second condition of perceptual knowledge-that, the method-related safety: having an ability A on this view means that an exercise of A could not easily go wrong (i.e., one could not easily fail to exercise A). Just as in Chemero's view, having the ability to walk does not mean one would not fall every once in a while, only that one would fall if one fails to exercise the abilities involved in walking – hence, there is a behavior one is expected to manifest if one possesses an ability. By now it should be clear as well that abilities themselves are methods for achieving specific ends, thus providing a proper analogy with method-related safety of belief formation. I could, after all, achieve the end of locomotion from X to Y by walking, but also by bicycling. The fact that I could not achieve that end by bicycling (imagine I do not know how to) does not mean I would not be successful by walking.

When it comes to direction of fit, there is more to the picture than meets the eye. For although there is a clear sense in which particular exercises of the relevant abilities and obtainment of the resulting ends are due to the individual, and to that extent the analogy with perceptual knowledge-that holds; things are not as clear in a larger scale when we consider the development of a cognitive system. According to the radical enactive approach, the individual's actions in the environment are constitutive of her cognition, but which actions she can perform is determined partly by how the environment is displayed. This is also why embodied abilities are strongly *situated*, unlike conceptual abilities, which are general and compositional. Moreover, actions cause changes in the environment and this in turn changes the set of possible actions one can undertake. Thus:

> Developmental systems evolve as a function of themselves, how they modify the resources for future generations and of [common environment], how it modifies the (same) resources for future generations. Effect of changes in [common environment] can be understood only in terms of how they induce changes in [the population's environment]. (Turvey et al. 2008: 267)

The interdependence between individual and environment is why most proponents of embodied cognition take the coupling of individual and environment to be a dynamical system, a system that changes through time and that can be described and predicted by dynamical systems theory without appealing to representational contents. Importantly, the changes in environment characterize what Gibson (2015) called niche building. As the

interactions between individual and environment unfold, niches can be built and arranged in order to better fit the individual's abilities and enable different behaviors. Therefore, although there is an analogy, on the one hand, between the direction of fit of the kind of perceptual knowledge acquired by the exercise of embodied abilities and, on the other, the direction of fit required for the knowledge-that, the mutual influence between individual and environment that happens over time could be taken as evidence of a profound disanalogy. However, as long as we focus on specific exercises of sensorimotor abilities and their relation to the non-propositional varieties of perceptual knowledge, the analogy is preserved: an individual still has to *exercise* her ability in accordance with what the environment offers in order to come to know-how/where/when – therefore, non-propositional perceptual knowledge, like perceptual knowledge-that, does not come for free. That is why, on the radical enactive approach, we preserve the core intuition underlying the internalist motif that is part of the motivation for epistemological disjunctivism: perceiving is something one *does*, not something that merely happens. Thus, we explicitly reject a mere causal, givenist conception of perceptual knowledge.

3.4. The Normative Constraints on Perceptual Knowledge

Can contentless perceptual knowledge be subject to the same normative standards as perceptual knowledge-that? We started to answer this question by noticing that, if one has an ability A, there is a way one is supposed to behave, that is, one must achieve success by exercising A. Naturally, success is a matter of degree: one's perceptual experience can be improved by one's actions (conversely, a perceptual experience can be worsened, to a certain limit, if one repeatedly fails to interact with the environment). This is an important sense in which contentless perceptual knowledge is normative: it can be better or worse according to what one does.

A very similar view was offered by Kelly (2010), according to which it is a constitutive part of one's experience to act towards its improvement.[36] Kelly focuses on the phenomenon of shape constancy, arguing that changes in context (say, angle or distance variations between the observer and the object) are subject to normative demands. How well one perceives a square object, for instance, *constitutively* depends upon one's actions to get a better view of its

[36] I am greatly thankful to an anonymous referee of Filosofia Unisinos for this suggestion.

squareness. That is not the mere empirical claim that we tend to get a better view of objects by moving around or squinting our eyes. Kelly, following Merleau-Ponty, claims that to perceive is (at least partially) to be "drawn towards a maximal grip on an object" (Kelly, 2010, 152).

There are two important consequences to be drawn here. First, if one completely fails to engage with a presented object, at the limit, one does not perceive it: "if I am totally lost in this respect [on how to improve my experience of the scene], therefore, I cannot count as seeing any particular thing at all" (152). Secondly, there are no "indifferent" perceptual states, such as mental pictures of the environment which are neither action-oriented nor action-orienting (or, as Kelly puts it, a 'neutral Humean images'). If perceptual states were indifferent in this sense, then we would be unable to distinguish between a straightforward view of a trapezoidal object and a skewed view of a square object. But we can, mainly because our experiences are dynamical and normative: there are better and worse ways of perceiving something and we enact those ways.

Kelly does have the right idea when it comes to the dynamical character of perceptual experience and its constitutive dependence on our activities according to certain normative standards. There is, however, something remarkably counterintuitive in his proposal, namely: that one's perceptual experience comprehends, at the same level, objects with their properties (squares and squariness) and the drive to improve one's experience. If we describe our current experience, we certainly find objects and properties, but we do not find that drive, for the drive itself is not represented. That might seem to suggest that our perceptual experience is static, but this is obviously not the point I am making. My point is that we should distinguish different levels of cognition, and that description (with objects and properties) is a more sophisticated level than contentless cognition. Present tense, first personal description is misleading because it disrupts our ongoing engagement and calls for a higher level of attention, turning ourselves away from our environment and towards our own experience.

However, Kelly fails to account for that difference when he claims that "every experience of size or shape is *not just the perceptual representation of a property*. Rather, the experience already invokes a kind of normative self-referentiality" (149, my emphasis). Obviously, the problem is not with his claim that perceptual experience is normative. The problem lies instead in his smuggling of a representational (contentful) view, which entails a conflation

between basic and complex levels of cognition. Consequently, it seems that the perception of possibilities of action and the perception of objects and properties carry the same epistemic weight. But, given that possibilities of action are more fundamental, it is clear that we do not see squares and squareness as showing up when we move in the same way that we experience possibilities of action. Both levels of cognition, however, are under the same normative idea of success. Specifically in the case of non-propositional perceptual knowledge, success is to be specified in terms of prolific engagement, whereas when it comes to perceptual knowledge-that, success is specified in terms of factivity.

An alternative approach was recently presented by Noë (2015), who claims that concepts are skills of access. According to Noë, in knowing-that perceptually one manifests the behavior of successfully accessing the environment in a conceptually articulated manner (also, we should add, by possessing these concepts, one could not easily fail to apply them). In connection with the point made above, both factivity and success are modes of accessing the environment.

However, we must be careful in following Noë here, for his intent is to articulate a pluralist view of concepts, according to which not all kinds of concepts are the ones that figure in judgements as attributions of properties to individuals and are subject to logical constraints. Among the different kinds of conceptual understanding, he distinguishes the '*perceptual understanding*, or what we might call *understanding concepts in the perceptual mode*' from the '*active mode;* understanding, that is, that can find expression, immediately, in what we do.' (2015, 3). To exemplify:

> The idea that understanding a concept is mastery of technique, a mastery that has multiple, distinct, context-sensitive ways of finding expression, helps here. One way to express understanding of [the concept of] *dog* is to talk and write about dogs. Another way is to be able to spot dogs on the basis of their appearance. Still another is to work or play comfortably with dogs. And the list goes on and on. We put our singular understanding of what dogs are to work in these different ways, and the understanding consists in the ability to do (more or less) all of that. (Noë, 2015, 11).

As long as we accept that what Noë calls perceptual and active modes can be, to a significant degree, contentless skills of access, we can accommodate his view, but this in turn gets us into a merely verbal dispute. Naturally, the radical enactivist eschews the notion that perception and action are necessarily conceptually articulated, as long as 'concepts' are here understood

as mental contents with possible logical relations among themselves. But the radically enactive approach is clearly consistent with the notion of 'Noë-concepts' as skills of access. I recommend that we stick to the traditional view on concepts in order to avoid confusion. Moreover, we construed the notions of knowing-where and knowing-when as abilities to locate and track things in an environment and, more importantly, of knowing-how as an ability to perform certain actions in accordance with environmental features. We therefore gave a precise sense to the idea of *skills of access* which is independent of talk about concepts in general and Noë-concepts in particular.

Now, still on this topic of normativity, the radical enactive approach also appears to pose a problem for those who take perception to be a source of rationally grounded knowledge. For a traditional view of rationality holds that rationality operates in patterns of reasoning, which are reflexively accessible, or in certain supbersonal cognitive modules, that is, structures that process information by manipulating representations and rules in order to make such information available to the cognitive system. As an example of the latter, consider Marr's theory of vision (1982). According to Marr, three dimensional visual perception is the outcome of a series of subpersonal steps consisting in the application of rules that enrich the raw stimulus received on the retina. Retinal stimulation is, on Marr's account, just crude electromagnetic energy, so it is poor and ambiguous – by itself, it is insufficient to discriminate between objects, distances, shapes, etc. The brain then processes the received stimuli by applying certain rules to it. It is tempting to take the processes involved in transforming raw retinal stimulation into visual perception as patterns of reasoning, for just like inferences, they involve rules and representations. These processes, however, are not accessible from the first-person point of view, so one cannot control them – therefore, they are not strictly analogous to inferences. By any means, rationality is traditionally taken to be manifested in truth conductive or probabilistic processes which are essentially contentful. A contradiction looms.

The alternative account of rationality we presented in the previous chapter enables us to avoid this problem, for it is inclusive enough to allow us to identify epistemic norms in the way an organism interacts with the environment through the exercise of its abilities. These abilities are broadly of two kinds: (i) ontogenetic abilities, i.e., abilities developed during the organism's individual history, which include the abilities to perform specific cognitive tasks

and to manipulate tools, as well as the problem-solving skills one can learn and refine in the course of one's life, and (ii) the abilities that have older phylogenetic roots, such as hard-wired abilities, selected by evolution, that must be exercised to allow for the development of other, more recent skills. Clearly, reasoning is a very specific ability that some animals are able to perform, with a success rate varying between individuals of the same species and between different species as well – but there seems to be no independent reason to suppose that reasoning must be *the only* form of ability that is constitutive of rationality. If we opt for a broader conception of rationality, we can accommodate without contradiction the ideas that perception is usually a contentless process and that it is rationally grounded, for it is the outcome of certain abilities, viz., sensorimotor abilities that enable one's successful, prolific engagement in an environment. Here is Hurley on the matter:

> Rationality reconceived in horizontally modular terms is substantively related to the environment. It does not depend only on internal procedures that mediate between input and output [...]. Rather, it depends on complex relationships between dedicated, world-involving layers that monitor and respond to specific aspects of the natural and social environment and of the neural network, and register feedback from responses. (2001, 10)[37]

Therefore, combining a minimal internalism, according to which perception is a source of rationally grounded knowledge, with an embodied view of cognition is acceptable insofar as we do not equate rationality with the ability to perform inferences. Finally – and this relates to the point mentioned in §3.3 about niche building – rationality so conceived is directly correlated with the kind of changes we promote in our environment, changes that enable us to thrive. The more rational an organism is, the more successful it is in adapting and dealing with different circumstances that call for adjustments and refinements of its abilities and the development of new ones. Plausibly, mutatis mutandis, the same can be said about species and the development of phylogenetic abilities. If a desideratum for any view about rationality is that humans in general are more rational than other animals (thus assuming a variation of degree), the radically enactive view clearly satisfies it.

[37] There is a social/cultural aspect to rationality that I am intentionally setting aside here, but which is clearly compatible with the present view. Menary (2013) proposes a variety of embodied cognition theory called cultural integration, according to which normativity is at least partly culturally based, given that certain cognitive activities - such as the use of representations in writing and calculating and the use of specific tools - are too recent in the history of mankind to be explained by older phylogenetic roots. A plausible explanation is that abilities with older phylogenetic roots, such as the recognition of shapes and contours, enable the development of more recent cognitive activities, such as reading and writing, once one partakes in a social/cultural environment. See Fabry (2015) for an attempt to combine cultural integration with a moderate embodied cognition theory that preserves the place of representational content.

3.5. From Perceiving to Perceiving That

The analogy between the varieties of perceptual knowledge and the shared normative constraints make it easy to answer whether different varieties of perceptual knowledge could be in conflict. Consider the particular cases an individual could be in: (i) she successfully achieves an end through the exercise of her sensorimotor abilities, say, tracking an approaching object by fixing her gaze and adjusting her position, and perceives that the object is approaching her; (ii) she successfully achieves the end of locating the approaching object, but fails to perceive that the object is approaching; (iii) she fails to exercise her sensorimotor abilities, but perceives that the object is approaching; (iv) she successfully exercises her sensorimotor abilities and locates the approaching object, but she perceives that it is not an approaching object; finally, (v) she fails to locate the object and to perceive that it is approaching.

Case (i) is clearly a case of harmony, while case (v) is one of lack of perceptual knowledge altogether. Now, assuming that the radically enactive approach makes it possible to understand certain cases of cognitive achievement as basic, thereby being essential for more complex cases of cognition without necessitating them, it is clear that (ii) is not a conflicting case. Indeed, (ii) is similar to most of our interactions with the environment. By the same token, it follows that (iii) is not possible, at least not in normal cases of cognition[38]. Finally, it seems that case (iv) would represent the only genuine case of conflict. But by factivity and its analogue of success, (iv) is also not possible: it would rather represent a failure of accessing the environment, either at the non-propositional level or at the contentful level. In each situation, therefore, it would not be a conflict between the different varieties of knowledge, but either a case of *failing to achieve non-propositional perceptual knowledge* (thus reducing (iv) to (v)) or a case of *failing to achieve perceptual knowledge-that* (thus reducing (iv) to (ii)).

[38] One could argue that (iii) is possible, as manifested in cases of akinetopsia, where individuals are unable to perceive motion. But even so, in cases like this, one would not perceive that the object *is approaching*, rather one would perceive that there is an object o at time t in position p, and then that o is at t1 at p1 and so on. That o is approaching the observer would be the result of an inference, not a content of perceptual knowledge.

Although cases where there is a harmony between different varieties of perceptual knowledge, like (i) above, seem to be less exciting, they also raise interesting points. First, there is some leeway between the act of perceiving an object and articulating the perceived event in a propositional fashion. Imagine again someone locating and tracking an approaching object. One can just dodge. But one could also perceive *that it is a tennis ball* that went by, or *that it is a tennis ball from the other court* – and one could also, albeit one usually would not, perceive *that it is a Wilson tennis ball* etc.

The second point concerns how one can go from non-propositional to propositional perceptual knowledge. One way to explore this transition is by what I call 'disruptive occasions'. Disruptive occasions are challenges that demand a higher level of attention in order to complete a task which, in their absence, could be successfully done without raising or shifting one's attention. Conversational challenges to perceptual knowledge readily come to mind: imagine I am at my office and I have a lot of stuff scattered around on my table. I can navigate through it just fine, grab a cup of coffee over there and pick up my kindle amidst the books without even looking, etc. But if someone asks me whether the coffee is to the right of the kindle, or at the same level as the books, I would have to pay attention to what I usually do inattentively in order to come to know it perceptually in a contentful manner.

Two further things about disruptive occasions must be noticed: first, that conversational challenges are not the default in our everyday life, we simply do not face challenges to our perceptual knowledge very often. Secondly, that not all disruptive occasions are conversational, there could be changes in the environment that would call for different actions and abilities. Imagine for instance that I successfully engage in the activity of writing a paper on my notebook. All goes well until I have to continue my work on a different computer (say, at the library) with a different keyboard design. After some mistakes I have to readapt and pay more attention when typing so I can know precisely where certain keys are. In this case, the view I'm advancing here says that, in the first stage, I'm perceiving my keyboard because I manifest a competent engagement with it, I know *how* to use it – for instance, how much pressure I have to put on the space bar for it to work – and *where* the keys are (I also know *when* they are, but there is no relevant temporal variation in this example). The change of keyboards is a disruptive occasion that calls for a different attitude: the same finger movements I'm used to perform while typing are not as successful as before because they do

not produce the desired results. Certain changes in the environment, therefore, are disruptive occasions because they demand different activities and, at a limit, the performance of entirely different abilities in order to achieve the desired result. We could imagine an example where the new keyboard I have to type on displays another alphabet, so I have to translate the keys. I would then perform a completely different activity than simply typing. In order to do this, at least at the beginning, I would have to *know that* this key stands for a specific letter by looking at it. In this case, knowing how to type simply is not enough to guarantee success, but I would still need to be able to locate and track the keys in order to type properly.

As mentioned, there is a clear relation between coming to know-that and attention, as it is plausibly assumed that knowing that something is the case demands paying attention to features of the environment that one would not usually notice. This can be taken to be one of the morals of the discussion about speckled hens (Sosa 2003, Fumerton 2005), where one perceives a speckled hen but, due to lack of attention, does not perceive the determinate number of speckles it has – so one does not know that the hen has that many speckles. This is compatible with our explanation of the transition between perceiving and perceiving that: when one is engaged with the environment without paying attention to one's specific actions and the achievement of the relevant ends, the available information is being accessed and managed by one's sensorimotor abilities. When a disruptive occasion occurs, attention is called for to modulate the flow of information in a contentful manner. How exactly this occurs is an empirical matter (and explaining it depends largely on a precise account of representational content), and while there is one available hypothesis – that the flow of information is modulated into working memory, which is a rule-driven process[39] – we do not need to subscribe to any hypothesis in particular at this juncture. The important thing here is that the function of attention is not merely to narrow the focus of an ongoing process, but to change it altogether by adding content.

It is important to notice that the threshold of attention changes from person to person according to one's background knowledge expertise. For instance, imagine a boxer performing a complex series of exercises with a punching ball, which is fixed to a board parallel to the ground and moves like a pendulum in 360º. Imagine that the boxer has to punch

[39] This is Clark's view on the relation between attention and memory (See Clark, 2009). The question about what attention actually is far from settled. For an overview of the available alternatives, see Wu (2014).

the ball two times with her right hand in two different directions and two times with her left hand in two different directions, occasionally adding more punches to each hand. An experienced boxer would be able to easily locate the ball during its trajectory in accordance with the strength she uses, the point where she hits it given a certain angle and the time at which she hits it with each hand. This exercise can be successfully performed without any effort in identifying the plethora of relevant variables at play. However, something like a very unpredictable behavior by the ball would call for a higher level of attention, e.g. if it suddenly loses some air, but not enough to become entirely flat. A disruptive occasion like that would prevent the experienced boxer from successfully attaining the relevant goal effortlessly, and, at least initially, would demand of her that she *knows that* the ball, being at a certain position after being hit with that much strength, and so on, would go this or that way. The story is completely different if we imagine a novice trying to do the same exercise. If one lacks the muscular memory that enables a quasi-automated performance, it is crucial to pay attention in identifying the relevant variables, and that can only be done by consciously following a rule more or less like 'you have to hit here, at this angle, when the ball is right here, with this much strength, so it…'. For the novice, the threshold of attention is lower than for the expert, and basically every movement by the ball demands attention to perform the next step. Note, moreover, that in order to achieve this knowledge-that, she *still* has to adjust her body in exercising her abilities and pay attention to her causal interactions with the environment, which explains why perceptually knowing-that is a more complex attitude, in the sense that it is dependent upon non-propositional varieties of perceptual knowledge.

A very similar view has been proposed by Dreyfus in his reading of Heidegger (Dreyfus 1991), according to which there is no real distance between individuals in non-disruptive occasions (or as he calls it, in absorbed coping) and the world. In one out of the many ways of exploring this position, Dreyfus takes absorbed coping to be entirely nonminded, for 'expert coping [is] direct and unreflective' and this is the 'same as nonconceptual and nonminded' (Dreyfus 2007, 355), which thus explains why individuals are not distanced from the environment. Our views can be taken to be substantially different depending on how the idea of *nonmindedness* is construed in Dreyfus's position. If by 'nonmided' it is meant a rational activity performed by a subject without her awareness of which rules she is following, then there is indeed a close connection between our views, for nonmindedness here means simply

following some kind of rule of engagement without having to (or even being able to) describe it.

If, on the other hand, 'nonmided' is used in a stronger sense, in order to highlight a form of presence in the world in which there is no subjective/objective divide, then there is a significant difference between our views. That is so because, if Dreyfus takes absorbed coping to be an event that happens in the world without a subjective dimension to be the source of agency, then there would not be *something* to be identified as instantiating proper cognition, something open to evaluation through the performance of an activity. In this latter interpretation of nonmindness, the difference between our views arises because I only go as far as to claim that one does not need to know that the exercise of an ability results in the achievement of the desired end in order to know-how, -where and -when. Importantly, since the radical enactive approach claims that cognition cuts across brain, body and environment, and assuming that cognition is a mindful activity, it follows that the kind of engagement with the environment achieved by the exercise of embodied abilities is mindful – and that is the reason why we are able to follow normative standards and why our performance is open to evaluation. That is entirely different from saying that we are 'nonminded' in doing something: we may be paying less attention than needed in order to conceptualize the situation and articulate it as a motive for action, but our mind is always there, extending through our bodies and into the environment. Moreover, how well we complete a certain task is a matter of degree and is intrinsically related to our abiding by the relevant norms (how we are supposed to behave) and our sensitivity to variations in the environment that call for nuanced exercises of our abilities. How else, for instance, would we be able to explain the differences in the performance of a specific task by an expert and a novice? If Dreyfus is committed to a stronger reading of nonmindness, then our present view is less revisionary than his, for I claim that we do act according to certain norms and we are susceptible of evaluative ascriptions even during the flow of an activity.

By any means, I do not intend the preceding discussion to display any exegetic accuracy regarding Dreyfus's readings of Heidegger, so it is beside the point whether there is an agreement between our views or not. What we need to highlight is that, when one is acting uninterruptedly, in the absence of conscious thoughts, motives or plans about what one is doing; this activity does qualify as cognitive and is open to rational evaluation.

3.6. Against tradition?

The radical enactivist denies that cognition necessarily involves content, and we advanced this position by appeal to embodied abilities that one could not easily fail to exercise. This means that perceptual knowledge is primarily non-propositional, so our view does oppose a tradition that takes propositional perceptual knowledge to be the only kind of perceptual knowledge, or at least the only kind relevant to epistemology. That is of course wrong, but we should ask ourselves why perceptual knowledge-that has received so much emphasis. By doing so, we can grant that some inquiries on the nature of knowledge-that are accurate – we indeed relied on them when highlighting the shared aspects of the different varieties of perceptual knowledge –, even as they fail to acknowledge that perceptual knowledge-that is not a case of basic cognition.

Epistemologists tend to suppose that the scope of knowledge-that is broader than it actually is because of a Cartesian methodological inheritance. Let us unravel that: just like in Descartes's *Meditations*, epistemologists traditionally begin their inquiries about the nature of knowledge by imagining a setting which is both artificial and static, in which an individual (who is supposed to be sufficiently representative), removed from the hassle of everyday life, holds a certain epistemological relation with a given object. This choice of setting is methodological because it is intended to clear away the noise produced by the relations of the individual with her environment which are supposed to be irrelevant for perceptual knowledge. But it ends up clearing away more than that. Of course, since at least Gettier, the dialectics of epistemological inquiries consisted basically in presenting an intuitive theory that covers paradigmatic cases, describing the epistemic principles underlying the theory, submitting them to counterexamples, adjusting the theory, testing it with new counterexamples and so on. But one can still find examples with an aura of the traditional approach in post-Gettier literature. A paradigmatic case, and one of utmost importance to recent epistemology, is Goldman's Barn Façade Case (1976), the example originally introduced by Carl Ginet. Here is his famous description of the case, which is intended to refute his earlier causal theory on perceptual knowledge:

> Henry is driving in the countryside with his son. For the boy's edification, Henry identifies various objects on the landscape as they come into view. "That's a cow," says Henry, "That's a tractor," "That's a silo," "That's a barn". (...) Suppose we are told that, unknown to Henry, the district he has just entered is full of papier-mâché facsimiles of barn. (1976, 772-3).

We all know how the rest of the story goes (Henry is actually seeing the only real barn in the Barn Façade County). What is important for our purposes is that we are invited to think that Henry is paying full attention while identifying things in the landscape by pointing at them. In these circumstances, it is only reasonable to suppose that one has to apply concepts to the seen objects in order to perceptually know them – but that is not the only way to acquire perceptual knowledge of a barn, for instance. One can walk around it and get inside. There are things one is able to do with a barn, such as housing livestock and grains, that one could not plausibly do with a papier-mâché facsimile. Importantly, I am not claiming that we never proceed like Henry, my point is rather that the setting in examples like this is very different from our everyday interactions with the environment – so the radical enactive approach is not against the epistemological tradition as long as we are putting a pair of brackets around the inquiries about knowledge-that and do not intend it to have an unrestricted scope.

Here is another, more recent example, of a case described in a very artificial and static way, thus ignoring the role played by action in perception. I apologize in advance for the painfully long quote:

> You are undergoing an operation for an aneurysm in your occipital lobe. The surgeon wants feedback during the operation as to the effects of the procedure on the functioning of your visual cortex. He reduces all significant discomfort with local anaesthetic while he opens your skull. He then darkens the operating theater, takes off your blindfold, and applies electrical stimulation to a well-chosen point on your visual cortex. As a result, you hallucinate dimly illuminated spotlights in a ceiling. (You hallucinate lights on in a ceiling. As yet, you are not at all aware of the lights or the ceiling of the operating theater.) As it happens, there really are spotlights in the ceiling at precisely the places where you hallucinate lights. However, these real lights are turned off, so that the operating theater is too dark to really see anything. (Well, all right, the surgeon has a small light to see into the back of your skull.)
>
> While maintaining the level of electrical stimulation required to make you hallucinate lights on in a ceiling, the surgeon goes on to do something a little perverse. He turns on the spotlights in the ceiling, leaving them dim enough so that you notice no difference. You are now having what some call a 'veridical hallucination'. You are still having a hallucination for you are not

> yet seeing the lights on in the ceiling, the explanation being that they still play no causal role in the generation of your experience. Yet your hallucination is veridical or in a certain way true to the scene before you; there are indeed dim lights on in a ceiling in front of you.
>
> In the third stage of the experiment the surgeon stops stimulating your brain. You now genuinely see the dimly lit spotlights in the ceiling. From your vantage point there on the operating table these dim lights are indistinguishable from the dim lights you were hallucinating. (Johnston, 2004, 122).

Johnston's point here is that epistemological disjunctivists cannot explain the seamless transition from (veridical) hallucination to perception. He intends to provide an argument for the premise of the argument from illusion/hallucination that deviant states enjoy the same epistemic support as cases of genuine perception. Thus, according to Johnston, we have to give up the disjunctivist claim that perception and hallucination are epistemically different in fundamental aspects. Although there are other ways for a disjunctivist to counter his argument (see, for instance Neta 2008), I think we can go as far as to grant Johnston the truth of the following conditional: in *such conditions*, perception and hallucination are very much alike. But no argument has been provided to show that these conditions are sufficiently similar to everyday interactions with our environment, in which our actions are not so tightly constrained. In particular, the ingenuity of the setting invites us to think that it is a very unique kind of case, a case in which someone is perceiving lights in the ceiling statically, unable to exercise her perceptual abilities correctly. The patient cannot move her head in order to distinguish the hallucination of lights (which would plausibly follow her movements) from the actual presence of the lights (which would stay fixed at certain points). If she could do so, on the other hand, and the surgeon were to keep track of her movements and generate new hallucinations in order to guarantee that her putative perceptual states were indeed hallucinatory, then this new scenario would not be much different from a traditional skeptical one, where mistakes are inevitable. It seems that Johnston's case can only work if we suppose that action is inessential to a full blown perceptual state. That, I think, points precisely in the opposite direction of what Johnston intends: a perceptual state deprived of action is impoverished, and it could be very much like a veridical hallucination. It is hard to see, however, what a case like that shows about perceptual states more generally.

3.7. Concluding Remarks

I intended to show that we can offer a philosophically sound account of perceptual knowledge as a case of contentless basic mind, viz., an account in terms of the exercise of embodied abilities. The non-propositional varieties of perceptual knowledge share aspects and normative constraints with perceptual knowledge-that, thus explaining why they fall within the same broader category of perceptual knowledge. However, given the view advanced here, more has to be said about cases in which an individual is systematically prevented from exercising her abilities, consequently not only failing to know, but failing to act rationally. We will examine that problem in the next chapter.

4. On Envatment

Abstract

The aim of this chapter is twofold: first, it is intended to articulate theses that are often assessed independently, thus showing that a strong version of epistemological disjunctivism about perceptual knowledge implies a transformative conception of rationality. This entails that individuals in skeptical scenarios could not entertain rational thoughts about their environment, for they would fail to have perceptual states. The secondary aim is to show that this consequence is not a sufficient reason to abandon the variety of disjunctivism here defended. The argument for this claim depends on the assessment of rationality attributions to subjects in plausible cases of illusion and some clinical cases of hallucination.

4.1. A Transformative Conception of Rationality

Commenting on McDowell's thesis that 'when we enjoy experience, conceptual capacities are drawn on *in* receptivity not exercised *on* some supposedly prior deliverance of receptivity' (McDowell, 1994, Lecture I, ¶5), Boyle writes that

> [...] an account of our sort of perceiving must itself appeal to capacities connected with rational thought and judgment. This is at least part of the significance of McDowell's well-known claim that the content of our perception is "conceptual": it amounts to the claim that the kinds of perceptual episodes which we rational creatures undergo must themselves be characterized in terms that imply the power to reason about the import of such episodes (Boyle, forthcoming).

The idea of a transformative conception of rationality, as advanced by Boyle, is that rationality is not something logically posterior to belief formation (and desire formation as well, but I will focus on the epistemological point). The competing views are called by Boyle, following Brewer (2003) 'additive theories', for they claim that rationality is to be *added* to the minimum 'animal' layer of cognition, which is passive, in the sense of lacking conceptual content. I will assume here the correctness of Boyle's criticisms of additive theories of rationality, that is, I will assume that once we separate the operations of rationality from a non-rational level of cognition, we end up having to explain how exactly those two entirely different levels or capacities can be reconnected as a unity (the Unity Problem) and interact

with each other (the Interaction Problem).[40] However, and we have emphasized this point, conceptualism is not the only way to reject the myth of the Given, so we do not need to follow Boyle in identifying a transformative conception of rationality with conceptualism. The central idea of a transformative conception of rationality is that rationality must operate at the most basic levels of cognition, so it follows straightforwardly that the radical enactive approach to cognition is committed to a transformative view, for rationality, on this approach, pervades action and perception and the subsequent formation of perceptual beliefs and other contents.

Importantly, the transformative conception is essentially 'disjunctivistic', for it denies the existence of a *common-kind* level of cognition that would be shared between our animality and the animality of (supposedly) non-rational animals, for, in our case, there is not a level of animality that is logically prior to the workings of our rationality. However, one might claim that an embodied notion of rationality is not transformative or disjuntivistic enough, for it would hold that there is a common level of cognition that is shared by humans and other animals.

There is some truth to that objection, for agency – understood as a prolific engagement with the environment and its salient features – is at the core of embodied rationality, and all sentient animals do conform to that overarching norm. That is the foundational idea of autopoietic enactivism, the view that there is a deep continuity between life and mind, for both are characterized fundamentally by their self-producing organization (cf. Maturana & Varela 1980, and Thompson 2007). It is far beyond our intentions to argue in favor of autopoietic enactivism here – but before addressing the objection above, we must make use of the autopoietic notion of agency in order to avoid the charge of excessive liberalism against our embodied view of rationality. To some extent, I am inclined to bite the bullet, for our view of rationality is intended to be broader than the narrow, traditional conception of

[40] Kornblith's (2012) criticisms of the ideas that reflection is a necessary condition for knowledge (for a special kind of knowledge, namely, *reflective knowledge*), freedom, soundness of reasoning, and normativity, are based on the supposition that rationality can only operate additively. He expresses the view he aims to attack as follows: 'my unreflective belief which simply registers the presence of the table, like my dog's unreflective belief which registers the presence of his food, is merely *passive*. But when I stop to reflect – something my dog cannot do – I become an agent with respect to my beliefs.' (ibid, 88, my italics). It seems possible to evade at least some of Kornblith's criticisms by appealing to a transformative conception of rationality, which allows for the notion of epistemic agency so that it is neither something posterior to belief acquisition nor something like freely choosing what to believe (which is the core idea of doxastic voluntarism).

rationality-as-reasoning. However, it is very important not to trivialize the present view. Consider a specific case: a Roomba can move in a straight path from A to B by exercising some hard-wired movements. Apparently, therefore, it is able to achieve a specific goal. Of course, a Roomba has an extremely limited set of abilities and consequently is also limited to overcome a substantial variety of shortcomings. The example goes to show that mechanic reactions could qualify for a minimum (perhaps *the* minimum) degree of rationality if we do not at least suppose there are criteria for agency. Of course, a Roomba is not an agent because it cannot sustain and adjust its own processes, so it cannot be said to perform a goal-oriented behavior rationally. In contrast, consider the case of the piping plover mentioned by Kornblith (2012, 51-2): the piping plover is a bird that feigns having a broken wing when it perceives a predator surrounding its nest. The feigning is used to lure the predator away from the bird's offspring – and as soon as the predator reaches a safe distance, the piping plover flies back to the nest. What is especially interesting is that this kind of bird is able to recognize persons and animals as nonthreatening once they pass by the nest several times without trying to attack, which prompts a change of behavior: the plover then ceases to pretend having a broken wing. The kind of goal-oriented behavior exhibited by the piping plover suggests that not only agency is at place, but also the sensitivity to different circumstances in which the relevant abilities can be successfully exercised. The piping plover is, therefore, definitely exhibiting some sort of rational engagement with its environment in a very specific way, which is thus very different from what a Roomba does, as the autopoietic enactivist would claim.

Back to our main objection now. If we consider that other animals may be rational in maintaining their cognitive states, does it follow that we share a minimum level of rationality of them? No! It is misleading to take the coarse-grained description of cognition-as-agency that lies at the heart of embodied rationality to imply some sort of additive view on rationality. The reason for that is that, if we are willing to say that other animals are also rational agents, we can certainly say that they instantiate different *kinds* of rationality. Naturally, rationality in other animals may have developed differently due to older phylogenetic roots and environmental pressures. Thus, it is reasonable to hold that other animals have different abilities which are thus manifested in different ways of enacting their cognitive states. Consider the several kinds of fishes, some reptiles, and a few birds and mammals that are able to *see* the ultraviolet end of the color spectrum, thus perceiving the world significantly differently from the way we do. The young brown trout, for instance, is

able to see UV rays for the practical purpose of mate choice (see Shi & Yokoyama, 2003), something that could be quite useful for humans and would probably save a lot of time from divorce paperwork.

We can describe the transformative view as follows: our animality essentially contains *our* rationality. In a less metaphorical way, on the enactive framework, we can say that the perceptual states entertained by a person are achieved by the exercise of her embodied abilities. Since the achievements of such perceptual states are to be counted as rational, rationality is already at work in the subject's basic level apprehension of her environment, so rationality is at work already in her maintenance of perceptual states. In what follows I will highlight an apparent problem for transformative notions of rationality when taken in conjunction with epistemological disjunctivism.

4.2. On Brains in Bodies and Brains in Vats

Recall that disjunctivism about perceptual knowledge is the thesis that there is nothing epistemically common between perception and deviant states if the objective, subjective and in-between conditions for the exercise of perceptual abilities are satisfied. That is, in appropriate conditions, one's perceptual state amounts to perceiving that *p*, thereby implying *p*. The satisfaction of these conditions is a way to guarantee that there is no trickery involved, one is not in a Gettier-style case, one's cognitive apparatuses are working properly, and one is rightfully unaware of any undefeated defeater of one's perceptual beliefs.[41] Following Pritchard, let us say that the satisfaction of those conditions puts one in a *paradigmatic* case of (propositional) perceptual knowledge. We then face the following *modus tollens*: given that perception (in paradigmatic cases) implies *p* and given that when one is in a twin bad case, say, hallucinating *p*, one is not entertaining a factive experience, *one is not having a perceptual experience*.

It could be argued, however, that all the *modus tollens* above succeeds to show is the following: when one is hallucinating that *p*, one is not in a paradigmatic case of perception, but one is still in a case of perception, a bad one. This route is available only insofar it is

[41] To be sure, it *does seem* contentious to talk about 'rightful unawareness', for phrases like these seem to imply some sort of deontology, the idea that a subject has a 'right to believe'. As mentioned before, we explain this in terms of background knowledge, not in terms of doxastic voluntarism.

assumed that there is *something* epistemically common between paradigmatic cases of perception and the twin bad cases, lessening considerably the strength of epistemological disjunctivism for dealing with the underdetermination skeptical argument. This is so because, on this reading of the argument above, there is a common level yet to be determined between paradigmatically perceiving something and hallucinating something, and this level is epistemically relevant, being more than a merely general kind such as 'being in a mental state'. In short, this reading of the argument denies a difference in kind, but accepts a qualitative difference between paradigmatic cases of perception and the twin deviant states.

Now, imagine that I look at a goldfinch yonder while I am writing this paper. Imagine this happens several days in a row, and that sometimes I see more than one goldfinch (suppose, of course, that the exercise of my sensorimotor abilities is successful, that my perception is delivering the right results and that there is no trickery involved). I then come to believe, quite rationally, that there are goldfinches around here this time of the year. Imagine now that (as the story usually goes) my counterpart in a vat in Alpha Centauri is receiving similar stimuli and entertaining false beliefs about its surroundings. Imagine it comes to the same conclusion, which, despite its falsity, seems rational. If there is nothing epistemically common between a paradigmatic case of perceptual knowledge and a case of envatment, and if rationality is already at work in the achievement of perceptual states, in the sense that it operates *in* perception as the actualization of conceptual capacities, then when one is not in a perceptual state, one's perceptual abilities are not working and one is, according to a transformative notion of rationality, deprived of rational thought. Therefore, in the scenario just described, I am the only one being rational, while my envatted counterpart lacks rationality. It follows, more generally, that envatted brains not only fail to have perceptual states, *they could not hold rational thoughts about their environment*.[42] And this seems outrageous!

In what follows, I want to dissolve the temptation to understand that conclusion as amounting to a *reductio ad absurdum* of at least one of the disjunctivist premises. One possible solution could be to adopt a weaker version of disjunctivism according to which individuals in vat

[42] Is there any other kind of rationality that brains in vats could manifest? It seems plausible that they could at least perform mathematical and logical inferences successfully. Brains in vats could also run, say, Cogito-like thoughts: a kind of thought that is immune to the vagaries of the external world (Burge, 1988). However, even if we accept that there is some sort of *a priori* or exclusively theoretical rationality, the main problem I discuss on this text remains: brains in vats could not entertain rational thoughts about their environment.

environments do share some general epistemic level with individuals entertaining genuine perceptive states, which implies that brains in a vat are rational despite their lack of factive perceptual states. But this is not an alternative I will endorse, as I stated above. On the other hand, if the adoption of a transformative view of rationality is equivalent to the denial of the Given, then to reject a transformative view has a high price, namely: we would be left with no explanation on how our encounter with the world gives us epistemic support for our beliefs. Therefore, my arguments below are intended to show that radical skeptical scenarios, by the very way they are described, show us nothing about the realization of our perceptual states and rationally grounded knowledge and beliefs.

4.3. Cases of *Unvatment*

The temptation to ascribe rationality to envatted brains is in part due to the idea that coherence is sufficient for rational thinking, which is in clear conflict with the idea that rationality is operative in perceptual states, which are factive. The reason for this inconsistency is that a set of false beliefs can be coherent. One problem is that a crude coherentism like this is not far from an additive conception of rationality, for it can be read as saying that there is a datum, a body of beliefs upon which it is expected from the individual to achieve some sort of explanatory coherence regarding her beliefs or at least to avoid inconsistencies. This second-level effort of maintaining coherence is the idea that rationality operates separately from first-order belief acquisition, although rationality would determine which perceptually acquired beliefs are to be endorsed in order to maintain coherence intact.

One way out of the puzzle is to hold that envatted brains are not rational, in the sense that they do not actualize their rational capacities in their deviant experiences, but they are still rational in a weaker sense, for they still have those capacities at hand (or at brain). Let us give voice to this idea and imagine a case of *unvatment*, that is, a case in which a disembodied brain in a vat raised in Alpha Centauri is brought to Earth and is surgically ensconced in a brainless body. This kind of case is intended to show not only that an unvatted brain can acquire perceptual knowledge like the rest of us, but, more importantly, that the unvatted brain's capacities were left intact while it was in the vat, in a way that it can eventually actualize those capacities in everyday thinking and perceiving just as we do. So, not only the brain can be rational once it is out of the vat and into a body, it *was* always rational before that. That is a considerable objection.

The objection fails. Firstly, so presented, the case of unvatment seems underdescribed, for it is not clear whether an unvatted brain would manifest the same perceptual states as ourselves[43]. Take for instance the clinical cases of experiential blindness we mentioned in §2.3, wherein individuals receive sensory stimuli but lack the understanding of how to integrate those stimuli in a genuine experience (cf. Noë, 2004, chapter 1). On a plausible interpretation, individuals that suffer from experiential blindness – say, patients recovering from cataract surgery – lack the abilities to transform simple stimuli into genuine experiences. An unvatted brain seems to be in a similar predicament, since it would undergo a change from the absence of perceptual states to the presence of sensory stimulation, but it would, *ex hypothesis*, lack the historic of interactions with the environment and the practice of embodied abilities that is essential for rationality on the radical enactive approach. Secondly, the case presented above involves the controversial supposition that a capacity that has *never* been exercised is a capacity for something. Would we say that I am capable of piloting a fighter aircraft? I have never even been near one. But in a way I am not entirely incapable – if I had been born with the required skills, if I were a trained pilot, maybe if I were not such a lousy Sunday driver, and so on. But this amounts to saying that, if things were completely different, I would be capable. The same thing goes for the unvatted brain: if it were in a *completely* different situation, it would be rational. This claim shows us nothing. And finally, that answer to the puzzle about the lack of rationality of brains in vats lessens the transformative claim that rationality is the *actualization* of certain capacities. This means that rationality would be at least partially additive, something that comes into play in a way that is logically independent of enacting a perceptual state – a way out that is not open to the die-hard disjunctivist.

Our interlocutor could try to reply by describing a slow-switching case, as the ones introduced by Burge (1988) in the debate between externalists and internalists about mental content and

[43] It is possible to hold that envatted brains *do have perceptual states*, although those states are fundamentally different from ours. Combined with the transformative view of rationality, it would follow that we and the individuals in skeptical scenarios instantiate different forms of rationality – so the core of my argument would still stand, for there would be an incommensurability between their rationality and ours. Note also that this view would be in the spirit of Putnam's externalism about mental content (Putnam 1981, chapter 1). One could, therefore, hold that brains in vats have perceptual states that are, in a way, factive, despite being intentionally opaque – they do not know, maybe cannot know, what they are thinking about. Therefore, if this view is correct, skeptical scenarios would trivially fail to show that one could be a rational individual despite lacking perceptual states. This is a fascinating hypothesis, and I am indebted to an anonymous referee for the journal in which a version of this chapter was published pointing that out, but I will not pursue it here. It does remain an open possibility for future inquiry.

self-knowledge. The case would work like this: consider an individual that was born in a normal environment on Earth and is normally connected to her body for an extended period of time. Somehow her brain is transported to a vat in Alpha Centauri without her awareness. There, our interlocutor grants, her capacities are not being actualized while she entertains deviant experiences that fall short of genuine cases of perception, but those conceptual capacities are still present (at least for a while) – she certainly did not lose them all at once. The argument goes: if she were brought back home after some time in the vat, we would surely say that she was still capable of being rational. And if this kind of case is committed to an additive conception of rationality, it is all too bad for transformative views.

Now, it is controversial whether individuals in slow-switching scenarios would retain their conceptual abilities, for this kind of case seems to be like a combined case of envatment and unvatment: from body to vat, from vat to body. How are we to be sure that the individual retains her abilities through these transitions? If sufficient time has passed while she was in the vat, it is not unreasonable to suppose that she lost the abilities acquired on Earth. It only makes sense to suppose she is rational if we also suppose she learnt *again* how to operate with the received stimuli when she was unvatted. Imagine that I learnt to play the guitar when I was a teenager and that I never played it again, as it is indeed the case. If I tried today, I would face quite a few difficulties: I would not remember most chords, my hands would be too slow, I would miss the strings too frequently, the melody would stammer, etc. Would we say I am still capable of playing the guitar? And what would happen if I lost my hands and got them replaced with prostheses? I would only be capable of playing if I learnt it all over. Moreover, whatever the answer we give here, it seems of lesser importance, for this argument reaches a dead end. Not because slow-switching cases are logically impossible – they certainly are *logically possible*, and maybe only that – but because the fiction of thinking about brains in vats relies on an undue extrapolation of normal cases of mistake and deception, something that causes our intuitions to become fuzzy and, in the worst case, unreliable. I am not saying that philosophical intuitions are generally unreliable or that they show us nothing. My claim here is more specific: something in the construction of a skeptical scenario goes amiss, and in what follows I will try to specify what it is.

4.4. Hallucinations, Illusions and Ascriptions of Rationality

In contemporary epistemological debates, skeptical conclusions arise from arguments in which epistemic principles are at work – such as the closure principle for knowledge (or justification) and the underdetermination principle. I will not focus on such principles here as I have done in the previous chapters. Instead, I will sketch a solution to the puzzle about the rationality (or lack thereof) of envatted brains that hinges on questioning the legitimacy of skeptical scenarios. If this answer is correct, it may be a good starting point to undermine skeptical conclusions in general, but I will not explore this possible upshot here. Moreover, my diagnosis is dependent upon the enactive approach, so it does not necessarily translates to other frameworks.

First of all, skeptical scenarios are based on the possibility of error, as is well known. But skeptical conclusions cannot arise from the mere observation that we *know* that sometimes we make perceptual mistakes, for this would directly undermine any sort of general skepticism, i.e., the claim that it is possible that *all* our putative episodes of knowledge are cases of deception. This generalization depends on the evaluation of error episodes, and cases of illusion and hallucination are perfect illustrations. The role played by skeptical possibilities is to extrapolate these kinds of errors, illusions and hallucinations, in order to construct a special kind of case represented in a skeptical scenario, where the possibility of error is massive and inescapable. There are significant differences here, so I will treat each of these cases in turn.[44]

Consider first cases of illusion: when we entertain an episode of illusion, our perception delivers results that an external observer can conclusively determine as false, for instance: when we see a stick partially immersed in the water, we (allegedly, as the argument goes) come to think that it is broken. The same goes when we look at something very closely and, allegedly anyway, we see it double, thus (so the argument goes) coming to think we are looking at two different things rather than one. Those are commonplace examples. Let us loosen our diet a bit and imagine a child that goes to a show of magic. She sees a magician cutting the assistant in half and genuinely comes to believe that the poor assistant is indeed cut in half. Now, in these cases, the deliverances of perception are misguiding, generating false results, but are at least partially based on genuine experiences – the beliefs that the stick

[44] It is important to notice that there is some overlapping between the concepts of hallucination, illusion and misperception, but these intermediary cases do not affect the main argument.

is broken (when there is a stick), that there are two things here (when there is at least one thing), that the assistant is cut in half (when there is an assistant).

When we describe cases of illusion like that, we ignore the role that background and additional information perform, let alone the fact that people usually can move around and see things from different perspectives. The child, for instance, may ask her parents whether the assistant was really cut in half. By putting together new information such as the fact that magicians intend to entertain people through tricks, uses of light, distraction, stunts and of course stage ability, the child is able to correct her initial belief. In subsequent cases, given her access to new information from reliable sources, she is able to immediately assess her perceptual deliverances, for she is now in possession of a richer body of background knowledge. The other two cases admit similar construals: we of course usually know we are not looking at two different things when we bring a piece of paper closer to our face – for we have additional and background information about the position of the object, about where it was standing in relation to our face a few moments ago, etc. Importantly, given the radical enactive approach, our perception is dynamic, viz., dependent upon our abilities to navigate through the environment. That being the case, we can move our faces away from the object or close one eye. We certainly have seen stuff being immersed in water without breaking – we can pick up the stick and look at it out of the water, we see the line wherein the medium changes (from air to water), we can hold the stick and perceive it is not broken – and we usually *do not believe* that the stick is broken. This is one way to read Austin's criticisms of the sense-data theorists' reconstruction of what it means to say 'the stick looks broken' and 'I am perceiving two pieces of paper'. Commenting on this last sentence, he writes:[45]

> It is, I suppose, true that, if I know that I am suffering from double vision, I may say 'I am perceiving two pieces of paper' and, in saying this, *not mean* that there really are two pieces of paper there, in the sense that anyone not apprised of the special circumstances of the case would naturally and properly, in view of my utterance, suppose that I thought there were two pieces of paper. However, we may agree that in saying 'I am perceiving two pieces of paper', I may not *mean*-since I may know it to be untrue-that there really are two pieces of paper before me (Austin, 1962, 89).

[45] On 'I am seeing a stick that looks broken', Austin's comment is that the use of such utterances do not imply that *there is something being perceived that is broken*, as Ayer (1940) suggests, something that should be characterized as a mind-dependent object immune to doubt, the sense-datum.

A down-to-earth description of cases of illusions must allow for the fact that we are perfectly able to put ourselves, imaginatively or otherwise, in different positions. We sometimes rely on high-level cognitive processes, such as memory and inference, so we can remember we brought the paper closer to our eyes or that the stick was not broken a moment before or that when light goes through different mediums it suffers refraction or that people cut in half usually do not keep smiling and waving. But we do not need to go that high up on cognition. Our sensorimotor abilities play an important role in explaining away plausible cases of illusion: we can move around, see things from different perspectives – and we apprehend, through our movement, information about what remains invariant and what changes in an environment. In normal cases, we *would* say we are rational when avoiding being taken in by illusions, because it is entirely available to us to do so. We *can see* that there is something wrong with what is shown to us[46]. Imagine someone sees for the first time the Müller-Lyer diagram and forms the false perceptual belief that one line is longer than the other. She then decides to check for herself and draws the lines and the arrowheads. In this process she becomes aware that the lines do not have different sizes, even if they appear so. Thus, despite things appearing as so-and-so in normal cases of illusion, we *know* – or at least we generally can acquire the relevant knowledge – that things are not as they look and so we can avoid believing illusions are real. Once we flesh out these details, we understand why we are willing to say that individuals entertaining episodes of illusion are (or can be) rational, for we are supposing that they can become aware that things are not what they seem in cases of illusions – which is generally true for down-to-earth cases. As I will reiterate below, this is not what happens in skeptical scenarios.

Unsurprisingly, we would indeed refrain from ascribing rationality to individuals that *inevitably* fall prey to illusions of *any kind*. Imagine someone who inevitably believes that the stick is broken when immersed and believes it becomes straight all of a sudden when taken out of the water. A subject with these epistemic vices certainly could not put herself in the

[46] One moral to be drawn from this discussion is that there is a demand of coherence for the maintenance of rationality in perception, and this coherence is operative in the harmony between background knowledge, current perception and information added by possible movements of our body. A consequence of this is that the richness of the conceptual scheme a subject possesses enhances her rationality, in such a way that different subjects, and the same subject through time, can be more or less rational. It is possible, for different people and for the same person at different times, to perceive the world with more or less accuracy. Notice that this appeal to coherence is different from the crude coherentism I mentioned above: I am not saying that coherence is sufficient for rationality, I am saying it is a regulative ideal, but there is a crucial qualification here. Coherence is not something operating independently of perception and belief acquisition, it is already operating in perception as the vehicle of first-level thought about the world.

alternative position of imagining an object from a different angle or through the combination of sensory different modalities (sight and touch and hearing and proprioception combined, for instance). As a consequence of such perceptual, imaginative and sensorimotor limitations, this person would always see, for instance, a ball as a flat circle, and we would probably say that there is something wrong with her cognitive capacities. This person would believe that a piece of paper becomes two when it is close to her face, and that objects change size as we approach or move away from them. She would, so to speak, be trapped in the perspectival aspect of experience. There is no temptation whatsoever to claim that she is rational – further evidence for this is that her interaction with the world would be extremely impaired! The dynamic relations between thought, perception and action, which in normal cases are maintained by the rational engagement with the world, would fall apart.

Consider now cases of hallucination. In normal cases, individuals that suffer from hallucinations sometimes entertain deviant experiences simultaneously with genuine cases of perception. Imagine someone sitting by the fire like Descartes in his meditations, and imagine also that our subject is very tired or stressed and almost asleep, and she suddenly seems to hear someone calling her name. She has a very rich body of true beliefs about her environment (she sees the fire, knows it is night out there, has true beliefs about the color of the walls and what not), but "hears" an imaginary sound – not in the sense that she *voluntarily* imagines someone calling her name, but in the sense that no one was really calling her, she only seemed to hear her name. Cases like this, wherein a subject entertains an auditory hallucination, suggest that hallucinating subjects do not conjure a whole world from scratch, disregarding every input of available information – either presently received or inert, but accessible, in the background of her experience. Now, it seems that generally this kind of isolated occurrence is immediately accompanied by the discredit of the hallucinated sound, for one has sufficient background knowledge to rule out the possibility that there is someone really calling one's name. If this is the case, the low credibility enjoyed by such episodes of hallucination (sometimes called pseudohallucination) makes us refrain from saying that the individual is irrational.[47]

[47] This is another reason to avoid conceptualism about perceptual experience, for it would be mysterious (to say the least) how a hallucination does not 'pass the test of coherence' if we accept epistemological disjunctivism as well. For, if that is the case, only perceptual (veridical) experiences are conceptually articulated. So hallucinations are neither coherent nor incoherent with the rest of one's experience. One could meet this problem by saying that additional and background evidences are used to verify, maybe subpersonally, a subjunctive conditional such as: 'if I *were* perceiving a sound S, there *would be* a sound S coming from a certain source at a

It is well documented that individuals suffering from Charles Bonnet syndrome – a condition that causes periodical visual hallucinations due to the gradual vision loss – are able to reliably discern intermittent hallucinations from veridical perception (Sacks 2012). In these cases, including ones in which the patient partially retains her perceptual capacities, there is no definitive impact on her abilities to successfully engage with the environment, what allows one to identify hallucinatory episodes through the context in which they occur and through the repetition of certain patterns (such as lilliputian individuals, fancy and colorful clothes, bizarre augmentations of facial features, lack of sound and interaction with the hallucinating subject, etc.). That means that one retains a rich background body of true beliefs that is sufficient to discredit the hallucinations as they appear – for instance, one knows that people are generally more than a foot tall, that noses do not magically change size, etc. More fundamentally, one can navigate through one's environment and, by the lack of response from the hallucinations, one can clearly discredit such episodes and distinguish them from actual perception. Therefore, individuals who suffer from CBS, but not from additional mental and physical conditions, are far from being irrational, since they still manifest perceptual competences and retain episodic memory of successful perception, enabling them to discriminate perception from hallucination.[48]

Nevertheless, we can try to imagine someone who approaches the possibility of failing systematically to distinguish hallucination from perception. That would be the case of some patients with severe schizophrenia – they regard the voices they sometimes hear as external, sometimes aggressive and demanding. Their background knowledge fails them, their

certain location, etc.', implying one *is not* actually perceiving a sound - what explains the low credibility of such hallucinatory states. Note, however, how onerous this solution is in comparison with the idea that some cognitive processes are simply contentless.

[48] See ffytche, D. (2013) for an argument that there is fRMI evidence that hallucinations of individuals with CBS characterize the activation of the same areas in the brain as episodes of veridical visual perception. Macpherson (2013) argues that it is open to the disjunctivist to claim that this evidence does not confirm a common-kind view, as opposed to a disjunctivist one, on the basis that it presupposes that perception is the end result in a chain of events that occurs in the brain. One way to understand the disjunctivist's claim is that perception is the chain itself, encompassing both the end result and the appropriate relation *with the object of perception*. Thus, the disagreement is on a philosophical level, not on an empirical one. Moreover, according to the view on hallucination that Macpherson calls the *strict disjunctive conception* (Macpherson, 2013, 23), hallucinating subjects entertain experiences that lack phenomenal character, what precludes them from knowing by introspection of the hallucinatory episode alone that they are not perceiving what they hallucinate. However, as I say above, they can know that their hallucinatory episodes are not veridical with the aid of embodied abilities and background knowledge.

cognitive abilities are impaired. They certainly are not entirely irrational, for they still entertain genuine cases of perception and are able to navigate their environment and perform some cognitive tasks. However, in intermediate cases like this, we are less tempted to say they are *perfectly* rational. The fact that they fall short of being perfectly rational is not a problem to our present view, for we emphasized that rationality admits a continuum. We can try to think about more extreme cases – imagine an individual who is constantly hallucinating, in a way that his hallucinatory experiences largely overcome genuine perception. Call him Gonzo and imagine he is in a *very* long and intense mescaline trip in Las Vegas. He would certainly fail to articulate most of his perceptual experiences, his memory and ability to reason projectively would be highly unreliable, his interactions with the world would be entirely unconventional to say the least. He would not only usually fail to achieve true perceptual beliefs about his surroundings, he would probably fail to assess his own immediate mental states as well. It seems that we could hardly ascribe Gonzo any degree of rationality if his hallucinations are like what the example suggests – but the key here is that, in such extreme cases, hallucinating subjects *do not* have their cognitive abilities intact despite the lack of factive perception, which is very different from more common hallucinations, such as pseudohallucinations and CBS hallucinations.

Now, it is safe to say that the rhetoric involved in devising skeptical scenarios and in the unexamined use of them often make it difficult to see what is going on – for skeptical hypotheses are introduced by saying 'imagine a brain in a vat whose perceptual inputs are being feed by a supercomputer simulating a normal environment etc.' and are later on just called 'BIV hypothesis' or 'Evil Genius hypothesis'. When we use a skeptical scenario like this, we assume some sort of continuity between those cases and everyday episodes of hallucination and illusion. And it does seem that there are some similarities between everyday cases of mistake and skeptical scenarios. The envatted brain has deviant experiences that consistently deliver false results: all of its beliefs about the external world are false, including the ones about its non-existent body and its personal history and so on. In this sense, the envatted brain's case is *similar* to a case of hallucination, with the significant difference that it *never* entertains veridical beliefs about its surroundings – it is unable, given the very way the scenario is set up, to use its bodily abilities and background knowledge to check its deviant experiences. By contranst, individuals who suffer from hallucinations sometimes have genuine, true beliefs mixed with false ones, and are sometimes able to separate them. Only in

extreme cases, like Gonzo's, individuals approach the possibility of systematically entertaining false beliefs – but this case is still different from a skeptical scenario, for Gonzo certainly has bits of memory and sparse episodes of genuine experiences (after all, he must remember where to buy mescaline). We are inclined to say that individuals in actual cases of hallucinations are still rational, for they are able to discern genuine perception from deviant experiences. But we are less inclined to say that Gonzo is perfectly rational, since his cognitive abilities are in general unreliable. Skeptical scenarios ask us to think of subjects who are systematically entertaining false beliefs *and* have perfectly functional cognitive abilities – they can reason properly, they can remember stuff, they are careful when considering the available evidences, etc. (otherwise we would not even be tempted to say that they *could* be rational in the first place). Therefore, there is something clearly amiss here: to the extent that such scenarios trade upon cases of hallucination, they do not behave like normal cases, and this difference is fundamental to ascriptions of rationality. Hence they show us nothing about what it is to be rational.

Now, the envatted brain is also, in a way, being deceived by illusions. For when we talk about illusions we sometimes imply that someone has the intent to mislead someone else (think about the magician), or maybe that something was designed with such intent (the Müller-Lyer illusion). Not by accident, the information fed to the brain in a vat is always manipulated by some entity: an Evil Genius (as in the classic Cartesian scenario) or an evil scientist commanding a supercomputer or something along the same lines. But the key in the skeptical scenarios is that *there is no way* for the subject to avoid being deluded, there is *nothing* she can do[49]. When we see a magic trick we know, by the context we are in, that the trick is not *really* as it appears. The same thing goes for Müller-Lyer lines, we can draw the lines ourselves and see they are the same size. And here is the discrepancy, for this is not what happens in a skeptical scenario. In a skeptical scenario, there is nothing one can do to get out, to avoid believing falsely. So, in the precise sense that illusions are unavoidable for the envatted brain, the subject in such scenarios is like the person who always mistakes a ball for a flat circle or thinks that the stick magically turns broken, then straight and then broken again – as if she were trapped on the perspectival aspect of perception. Note, however, that the way the case is described suggests that the envatted brain has perfectly functioning cognitive capacities (what would tempt us to say it is epistemically responsible at least). Nevertheless,

[49] Faria (2009) advocates the same view in his criticism of slow-switching scenarios.

the idea of cognitive capacities functioning flawlessly is in clear contrast with the idea of an individual being systematically deceived by illusions. In this case too, we have a fundamental difference between normal cases of illusion and what skeptical scenarios invite us to consider. That is why such scenarios show us nothing about what is to be rational.

4.5. Concluding Remarks

I expect to have shown that the radical enactive approach explored previously is a transformative view of rationality. Taken together with epistemological disjunctivism, this means that envatted brains could not be rational, and this consequence seems to be in tension with some widely shared assumptions. Is this consequence truly problematic? Apparently we can conceive of situations in which brains in vats avoid inferential pitfalls and are careful when assessing the available evidence. But does this show that rationality can be achieved independently of the relation one holds with the environment? I do not think so. My arguments in the last section are intended to highlight that skeptical scenarios are not mere extrapolations of genuine cases of illusion and hallucination: skeptical scenarios rely on the confusing idea of an individual being systematically deceived *and* manifesting irreproachable cognitive abilities. When we evaluate a person's rationality in normal cases of illusion and hallucination, either we are inclined to say the individual is rational because her cognitive abilities are working properly and she is able to discredit the deviant experiences (some cases of Charles Bonnet syndrome, pseudohallucinations, immersing a stick in water, etc.), *or* we are inclined to say that the individual fails to be rational because she is unable to discredit deviant experiences (Gonzo's case, some schizophrenics, the person who is trapped in the perspectival aspect of perception). Essentially, this depends on the view that experiences are dynamic and not static.

It seems that philosophical tradition has ignored the implicit discrepancy between, on the one hand, what skeptical scenarios invite us to consider and, on the other, everyday attributions of rationality. As a consequence, it has put weight on the idea that we are inclined to say that envatted brains could be rational, instead of questioning whether it makes sense to ascribe rationality to individuals deprived of their bodily abilities. The theoretical justification for this

is in part due to the underscrutinized acceptance of additive views on rationality, as Boyle puts it, – yet the underlying conjunctivist view on perception also plays a part. Now, if the design of skeptical scenarios is in conflict with our intuitions about the rationality of individuals in everyday cases of hallucinations and illusion, it is not surprising that we *may not know* what to say when we take a closer look at skeptical hypotheses. The upshot is that skeptical scenarios show us *nothing* about our rationality, in particular, they *do not testify against* our conclusion that it is only possible for an individual to be rational about her environment if she normally enjoys genuine cases of perception. The core of my critique to the construction of skeptical scenarios is similar to an idea brilliantly expressed by Austin:

> If we have made sure it's a goldfinch, and a real goldfinch, and then in the future it does something outrageous (explodes, quotes Mrs. Woolf, or what not), we don't say we were wrong to say it was a goldfinch, *we don't know what to say*. Words literally fail us: 'What would you have said?' 'What are we to say now?' 'What would *you* say?' (Austin, 1946, 88).

I think the results we reached here suggest important considerations on the value and the limits of using skeptical scenarios (and maybe, more generally, science fiction) in doing philosophy. Finally, and this should be clear, with this argument I did not intend to convince anyone unwilling to accept a disjunctivist conception of perceptual knowledge, but, as the discussion advances, the motivations and advantages of this view may be a good starting point to revisit some traditional and unquestioned conceptions.

5. Radical Enactivism and Self-Knowledge

Abstract

I want to conclude this work by showing that we can attain a middle ground between a perceptual model of self-knowledge, according to which the objects of self-knowledge (one's beliefs, desires, intentions and so on) are accessed through some kind of causal mechanism, and a rationalist model, according to which self-knowledge is explained and constituted by rational agency. By analogy to the role played by the exercises of sensorimotor abilities in rationally grounded perceptual knowledge, self-knowledge is taken to be an exercise of action-oriented and action-orienting abilities. This view satisfies the privileged access condition usually associated with self-knowledge without entailing an insurmountable gap between self-knowledge and knowledge of other minds.

5.1. Know-how and Abilities

Radical enactivism about perceptual cognition is the view that our perceptual access is primarily constituted by our activities in our environments (Noë, 2004, Hutto & Myin, 2013, Chemero, 2009). This view is *radical* because it eschews the ubiquity of representation in cognition – we do not need to posit representational vehicles and semantically articulated information in order to explain how we come to know our environment. Rather, perceptual cognition is explained through the dynamical engagement with the environment by the exercise of sensorimotor abilities (Hurley, 2001), that is, the activities of collecting sensory information from the environment and enabling it for further motor engagements in a loop. So understood, perception is *action-oriented* and *action-orienting*. Moreover, given that the actions one can undertake are constrained by one's bodily dispositions, radical enactivism is within the research program on embodied cognition.

Embodied cognition enjoys good empirical support, such as the Haken-Kelso-Bunz (1985) model of social coordination (for a broader application of the HKB paradigm, see Chemero, 2009: chapter 5) and Thelen's work on A-not-B errors (Thelen et al., 2001). I am not going to argue in favor of embodied views of cognition here, instead, I am going to assume the correctness of a radical enactivism about perceptual cognition and explore the possibility of developing a radically enactive approach to *self-knowledge*, that is, knowledge about one's

own mental states[50]. Similar accounts have surfaced the literature about knowledge of other minds (as we will see below), so it stands to reason that we may come to know *our own minds* in an enactive way as well. Before offering a radically enactive account of self-knowledge, I want to highlight two key aspects of perceptual cognition in this framework, for this will be useful in situating the present account in the ongoing debate about self-knowledge.

The first point is about the construal of perceptual *knowledge*. If perception is a source of knowledge, and if the radical enactivist holds that perception is essentially a contentless process, then perceptual knowledge has to be identified, primarily, as a kind of *know-how*, and not as a kind of propositional knowledge. Accordingly, there is a *prima facie* identity between exercises of sensorimotor abilities and displays of practical knowledge: it is intuitive to say that if one is able to Φ, one knows how to Φ, and if one knows how to Φ, one is able to do so. And the same seems to be the case for the specific case of sensorimotor abilities. Unfortunately, matters are not as straightforward. As Carr puts it:

> There is nothing in the least paradoxical about describing an elderly and arthritic piano teacher or a temporarily incapacitated gymnast as knowing how to do whatever they cannot currently perform. […] An agent may perform a task of considerable complexity or sophistication without knowing how he does it. A novitiate trampolinist, for example, might at his first attempt succeed in performing a difficult somersault, which although for an expert would be an exercise of knowing how, is in his case, merely the result of luck or chance. Since the novice actually performed the feat one can hardly deny that he was able to do it (in the sense of possessing the physical power) but one should, I think, deny that he knew how to perform it. (Carr, 1981: 53)

Carr's first point is that in some unusual circumstances, one can know how to Φ without being able to do so. That seems to entail that having an ability to Φ is not necessary in order to know how to Φ – especially because abilities are highly situated in environmental and bodily factors, whereas procedural knowledge could, in principle, be stored in one's memory regardless of such factors. But that argument is too swift. In particular, it does not compel us to say one *does not have the ability to Φ*. Maybe a more accurate description is that elderly and arthritic piano teacher is currently prevented from exercising her abilities, given some external constraints, but not that she lacks those abilities. Moreover, if her condition is permanent, so that she *cannot perform* a piano piece, we may say that she does not have the

[50] It remains an open possibility to develop a radically enactive approach to the knowledge about *the self*. I am not going to explore it here.

relevant abilities, but then the only way for her to manifest her know how would be to invoke a very detailed description of how to play said piece. This is far from impossible indeed, and insofar as there is an overarching unity in our concept of knowledge, a transition from successful practical engagement to accurate description must be possible. But it is also widely unrealistic to suppose that our practical knowledge is always conveniently open to such detailed descriptions. The central ideal in the radical enactivist camp is that contentful perception is not the rule but the exception.

Now, Carr's second point does pose a more interesting problem. The idea that one can be able to Φ without knowing how to Φ seems straightforward in the case of the inexperienced gymnast that performs a difficult routine at her first attempt. Although the example sounds a bit far-fetched, we can grant its plausibility. But then the situation is the following: in *hindsight* we might say that the amateur gymnast was able to Φ, but would we expect her to Φ again if she tries to do so in similar circumstances? If we answer affirmatively, then we must ascribe to her the ability to Φ, so that she safely achieves Φ in appropriate circumstances – in the sense that she could not easily fail to Φ. That, however, does not seem to fall short of *knowing how to Φ*. We may be tempted to say that she merely does not *know that* she knows how to Φ (maybe because she is a natural and never thought about it). If, on the other hand, we do not expect her to successfully perform Φ in the future, her success in Φing at her first attempt was not the exercise of an ability, but sheer luck. She was able, in that particular circumstance, to accomplish Φ, but this is a very weak sense of 'being able' and there is very little credit in her performance. We would not ascribe her the *ability* to Φ in the future based solely in that observation. We cannot ascribe the possession of an ability to an individual solely by observing an isolated case of achievement, because cases like this may be positively affected by luck, whereas having an ability to Φ has a normative character: we expect a consistent behavior of someone who is able to Φ, namely, successfully Φing in similar circumstances.

There is one last line of reasoning that suggests a close relation between knowing how and having the relevant ability. Claims of know-how carry what we may call *practical implicatures*: if you claim to know how to Φ you must be able to Φ – in the sense that your success in Φing must be creditable to you. Similarly, ascriptions of propositional knowledge usually carry the conversational implicatures that one is able to properly support the relevant

claim, and that is the reason why epistemological internalism exerts such a powerful grip. Defeasible as this evidence may be – for pragmatic implicatures do not necessarily translate in accurate analyses –, it does hold true in everyday scenarios.

5.2. Radical Enactivism and the Emergence of Rationality

The second key aspect of radical enactivism I want to discuss is the conception of rationality it implies. The traditional, widely accepted view about rationality holds that there is a distinction between practical and epistemic rationality. The procedures that are relevant for rational *actions* are distinct from the procedures that are relevant for rationally grounded *beliefs* (they can, of course, be similar or analogous but only incidentally). Importantly, this view also takes rationality to be closely related to reason. Specifically, being epistemically rational is usually construed as being able to perform logically sound inferences, to assess reasons in the face of new evidences, to extract the correct conclusions, to achieve true beliefs and avoid false ones. When it comes to practical rationality, practical reasons should motivate decisions and actions through deliberative processes. Therefore, rationality is traditionally taken to be a capacity to articulate *contentful* states, such as beliefs. Clearly, the traditional view suits perfectly a classical computational theory of cognition, according to which cognition is the manipulation of internal representations (Ramsey, 2007). In that framework, rationality may be taken to be just the application of the relevant rules in the manipulation of the relevant symbols.

The traditional view, however, does not fit radical enactivism very well, at least insofar as we assume that rationality is operative in perception. If we deny that rationality is operative in perception, we face the problem of explaining how perception could carry epistemic power to other cognitive processes, given that these two domains do not share a common level of interaction (McDowell, 1994). According to radical enactivism, our fundamental mode of *epistemic* access to our immediate environment consists in our *actions*, so a stark divide between practical and epistemic rationality is a nonstarter, as we have seen in chapter 2. There, I claimed that we should not abandon the traditional view in its entirety, especially because we can preserve some of its genuine insights. At its core, it is the idea that rationality promotes epistemic and practical success, and that is why it is so dear to us: it enables us to distinguish successful achievements from merely lucky guesses. On the traditional view, when it comes to epistemic rationality, this translates to the achievement of true, well-

grounded beliefs (and to the avoidance of false and unjustified beliefs). So, at the very least, rationality is an ability of certain agents to achieve specific goals. What we *must* reject is that the articulation of contentful states is all there is to rationality. Successful engagement with the environment, even in the absence of reasons, is a rational endeavor if we shift the focus to a more inclusive view of rationality.

There remains the problem of explaining how rationality comes about in the framework of radical enactivism and embodied cognition more generally. First, as we have seen, we cannot take rationality to be the application of rules hardwired into the cognitive agents. To make matters worse, we simply cannot find rationality *at the physical level* (and the same goes for other psychological states). The most plausible explanation for the ontology of rational processes and events is that rationality is an emergent quality of certain autonomous systems. Briefly, emergent qualities are causally effective qualities that occur at a level *l* of description of a given system S and cannot be reduced to qualities found in a level *l-1* of S. Importantly, emergent qualities exert downwards causation as well as same-level causation (Humphreys, 1997). That is why rationality operates at the higher levels of cognition, wherein contentful states (such as planning, deliberating and inferring) are articulated, but it also informs and guides behavior top-down, orienting more basic levels of cognition such as perception and action. However, as an emergent quality, rationality is neither reduced to, nor supervening upon, the physical and chemical levels. Importantly, autonomous systems are "a network of co-dependent, precarious processes able to sustain itself and define an identity as a self-determined system" (De Jaeger, Di Paolo, Gallagher, 2010, p. 441). This qualification is required because we are inclined to ascribe rationality exclusively to *agents*, but not to merely reactive creatures (after all, Roombas can successfully interact with their environment, but it is counterintuitive to ascribe them some form of rationality however minimal it may be). The overall picture is briefly described by Hurley:

> Rationality might emerge from a complex system of decentralized, higher-order relations of inhibition, facilitation, and coordination among different horizontal layers, each of which is dynamic and environmentally situated. (2001: 10)

The central ideas developed in these two sessions are: (i) that perceptual knowledge is primarily a practical engagement, which is intuitively construed as a kind of know-how displayed by the exercise of sensorimotor abilities, and (ii) that there is no stark divide

between epistemic and practical rationality, and that rationality is not restricted to (although it does include) the articulation of contentful states. With these remarks in mind, we are able to develop the general lines of a radically enactive approach to self-knowledge.

5.3. Shoemaker Against the Perceptual Models

On the radically enactive account, self-knowledge is similar to perceptual knowledge in some important ways. Before explaining that, we need to address the influential arguments presented by Sydney Shoemaker against construing self-knowledge by analogy or approximation to perceptual knowledge. His first set of arguments consists in making it explicit that self-knowledge does not conform to the 'stereotype of sense-perception underlying what I am calling the "object perception model"' (1996: 204). He goes on to list the features commonly associated with perceptual knowledge, the most important of which, for our purposes, are that 'sense perception provides one with awareness of facts […] by means of awareness of objects'; that 'sense perception affords "identification information" about the objects of perception'; that 'perception of objects standardly involves perception of their intrinsic, nonrelation properties'; that 'objects of perception are potential objects of attention'; that 'perceptual beliefs are causally produced by the objects or states of affair perceived'; and, finally that 'objects and states of affairs […] exist independently of the perceiving of them' (1996: 205-6).

We can concede Shoemaker's point that self-knowledge has none of these features (at least in normal cases), without entailing that self-knowledge is not, in some respects, analogous to perceptual knowledge. This is so because, as Shoemaker makes clear several times, he has the "act-object" account of perceptual knowledge in mind. Radical enactivism does not imply this ontology about the objects of perception. Importantly, the talk about 'objects of perception' is misleading, for what we have in mind are their intentional directedness, and not discrete entities with well-determined qualities. By the same token, 'intentional contents' might suggest that knowledge has a representational structure, which is not the case for the radical enactivist. In what follows, I call the stuff that self-/perceptual knowledge is about its 'intentional constituents', so we can avoid the ambiguity of talking about *objects* and *contents*.

According to the radically enactive account, the intentional constituents of perceptual cognition are the *possibilities of action* elicited by the environment, *affordances* in Gibson's phrase, because our activities constitute our perceptual states: we first and foremost act in the environment. Therefore, we are not primarily aware of facts, nor objects. Of course, we *may* come to perceive stuff around us as discrete objects with such-and-such qualities, but this only happens after some further intellectual engagement. Importantly, the identification information we use in perceiving our environment is not primarily contentful, that is, semantically articulated. The informational structures relevant for identification are the constancies and contingencies we discover through our actions (Noë, 2004, Gibson, 2015), for we track aspects of our environment through the exploration of these structures, not by representing objects in internal models.

As for the independent existence of intentional objects, the matter is a bit trickier. No radical enactivist would open-heartedly embrace epistemological idealism, but if our perceptual cognition is primarily about possibilities of action, and if the actions we are able to perform are bound to our bodily constitution and dispositions, then the intentional constituents of perception, to some extent, are dependent upon us. Consider the perception of books as *graspable* and *readable* by literate adults, and compare with how mice might perceive books, say, as *climbable* or as *obstacles*. This difference, however, does not entail that books themselves exist only in relation to us. Another way of putting it, as we have seen in §2.4, is that we perceive books *as* readable, while mice perceive books *as* climbable, due to the difference abilities involved, but the books themselves exist independently of our actions. Thus, Shoemaker is not entirely wrong in his assessment, but there is a minimal (non-idealist) sense in which the intentional constituents of perception are dependent upon our bodily configuration.

To summarize, Shoemaker misses the point by arguing that self-knowledge does not conform to the stereotype of perceptual knowledge. Radical enactivism is not committed to that stereotype either, so a proponent of such a view can still maintain that self-knowledge is analogous to perceptual knowledge.

Shoemaker's other argument (1996: 25-49) is much more interesting, especially because it is fundamentally about rationality. The argument is directed against what Shoemaker calls the

broad perceptual model, which underlies Armstrong's view of self-knowledge (1968). That view has two tenets: we access our mental states through some kind of causal mechanism (whereas this does not necessarily conform to the stereotype mentioned above), and those states exist independently of the possibility of our access to them. Shoemaker's initial claim is that if self-knowledge is anything like perceptual knowledge, then it is possible to conceive of someone who is *self-blind*. A self-blind is someone who 'has the conception of the various mental states, and can entertain the thought that it has this or that belief, desire, intention, etc., but which is unable to become aware of the truth of such a thought except in a third-person way' (31). In other words, the self-blind (let us follow Shoemaker and call him George) cannot perceive introspectively his own mental states, like the blind cannot perceive visually their environment. What is more, Shoemaker considers that George is in no way different from regular people when it comes to his rationality.

> [As] I have defined self-blindness, it is supposed to be like ordinary blindness in not entailing any *cognitive* deficiency. The person who lacks sight can in principle be equal in intelligence and rationality and conceptual capacity to any sighted person. Likewise, the person who lacks access by inner sense to some kind of mental state, and so is self-blind with respect to that kind of mental state, can in principle be equal in intelligence, rationality and conceptual capacity to someone who is not self-blind. (1996: 236)

The argument, then, takes the form of a *reductio*: (a) if self-knowledge is analogous to perceptual knowledge, because its intentional objects exist independently of our access to them, it implies the possibility of someone being self-blind. However, (b) given that it is impossible to conceive of someone who is both self-blind and perfectly rational, it follows that (c) self-knowledge cannot be analogous to perceptual knowledge. This amounts to saying that the broad perceptual model is conceptually mistaken.

In support for (b), Shoemaker focus his discussion on Moore's paradox. Supposing that George is self-blind, it seems he might be prone to utter paradoxical sentences, such as 'it is raining, but I do not believe that it is'. That seems to be the case because the total objective evidence available to George – what is said in the weather forecast, the fact that people are coming inside wearing wet raincoats, or merely his being in England – supports the proposition that it is raining. However, when observing his own behavior in order to discover "in the third-person way" whether he believes that it is raining, George finds himself wearing shorts and sunglasses, not carrying an umbrella, etc. Nonetheless, if George is just as rational

as a normal person, he may be perfectly capable of recognizing the self-defeating character of Moore-paradoxical sentences and avoid them altogether. Therefore, 'it would appear that there would be nothing in his behavior, verbal or otherwise, that would give away the fact that he lacks self-acquaintance' (36). George would behave exactly like someone who does have self-knowledge. Now, if 'everything is as *if* a creature has knowledge of its beliefs and desires, then it *does* have knowledge of them' (34). Therefore, George has self-knowledge, which contradicts the initial assumption. It follows that (b): it is impossible to conceive of someone who is both self-blind *and* perfectly rational.

It is easy to see what the problem with Shoemaker's argument is[51]. By saying that self-blindness does not entail a "cognitive deficiency", Shoemaker is implicitly accepting the traditional view of rationality, according to rationality occurs at a high level of cognition, say, as the manipulation of representational contents in forming beliefs and assessing evidences, thus functioning independently of its perceptual inputs. As we have seen, that is exactly what the radical enactivist rejects through her transformative conception of rationality! Moreover, that is precisely the problematic assumption underlying Shoemaker's argument. Therefore, the case from self-blindness fails to prove that the broad perceptual model of self-knowledge is conceptually inadequate, as Shoemaker originally intended. The argument should be viewed instead as a reason to reject that rationality works at a level of cognition which is independent of perceptual cognition.[52]

5.4. The Transparency Account

Even if Shoemaker's main argument does not succeed, there are ways to vindicate his fundamental intuition, namely: that there is a constitutive relation between self-knowledge and its intentional constituents. This idea is explored by Richard Moran in his brilliant book *Authority and Estrangement* (2001).

[51] In a different assessment, Kind (2003) argues that Shoemaker's argument only succeeds if we suppose that self-knowledge is identified with self-acquaintance, so that his conclusion does not follow.

[52] That is not to say that those who lack certain perceptual capacities, such as actually blind people, are not rational. For rationality is a quality malleable enough to compensate for specific deficiencies. This allows for successful interactions with the environment through abilities not usually exercised and through the aid of certain mechanisms, such as the walking stick in the case of the blind.

One way to develop the idea of a constitutive view of self-knowledge is to follow Taylor (1981) in claiming that a description of oneself is sufficient to change one's internal states, which is why there is a fundamental asymmetry between knowing oneself and knowing other minds. However, as Moran rightly observes, that view yields counterintuitive results: if the description of oneself changes one's internal states, then there is a substantial amount of voluntarism and arbitrariness to self-knowledge. Thus, Moran is careful not to slide into a strong constitutional view of self-knowledge. In order to avoid the self-fulfilling character of self-interpretation without disposing the insight that self-knowledge is constitutive of its objects, Moran emphasizes the distinction between the theoretical and the deliberative dimensions of self-knowledge.

We do sometimes adopt an observational stance towards ourselves and describe our mental states as if they were objects of a theoretical knowledge, which suggests an analogy between self-knowledge and perception (where perceptual knowledge is understood in terms of Shoemaker's object-perception model). On this view, we come to discover what we are thinking as if our thoughts were previously unknown objects. That, however, is not the correct way to explain the distinctiveness of self-knowledge, for self-knowledge has a *practical* dimension, the deliberative one, which is not purely theoretical or epistemic. Discussing the case of knowing one's own intentions, Moran comments that knowing what one will do is 'not an expectation, based on evidence, but an intention, based on a decision'. (2001: 56). Thus:

> [A] practical or deliberative question is answered by a decision or commitment of some sort, and it is not a response to ignorance of some antecedent fact about oneself […]"Deliberative" reflection as intended here is of the same family of thought as practical reflection, which does not conclude with a normative judgement *about* what would be best to do, but with the formation of an actual intention *to do* something' (58-9)

For Moran, to answer a deliberative question about what I am thinking is a process whose outcome is a practical commitment, and that provides the link with rationality which is constitutive of self-knowledge. The reason for this is that the resulting judgement conforms to the *Transparency Condition* famously presented by Evans:

> [I]n making a self-ascription of belief, one's eyes are, so to speak, or occasionally literally, directed outward—upon the world. If someone asks me "Do you think there is going to be a third world war?," I must attend, in answering him, to

> precisely the same outward phenomena as I would attend to if I were answering the question "Will there be a third world war? (1982: 225)

As Moran notices, to say that my belief that *p* is transparent to *p* is not to say that the former reduces to the latter, nor that they inevitably have the same phenomenology. Rather, the transparency condition affirms that 'a first-person present-tense question about one's belief is answered by reference to (or consideration of) the same reasons that would justify an answer to the corresponding question about the world.' (2001: 62)[53]. Following Byrne's (2005) idea of a transparency rule, Gertler (2010) suggests we construe that idea as a *transparency method*:

> *If* p, *believe that you believe that* p.

However, as noted by Silva Filho (2013), nowhere in Moran's work the transparency claim is described as a *method* or *procedure* to be followed. We should take the notion of transparency *method* with a grain of salt, for it suggests that in order to acquire self-knowledge, we must conscientiously follow a specific procedure. This is too strong, for commits the transparency account with a stringent form intellectualism (however, as we shall see, there is some truth to that criticism). Rather, a more modest construal says that our deliberation must *conform* to that rule, as we mentioned above. The central idea is that by being sensitive to the reasons for accepting *p* (and assuming those reasons are supportive of *p*), I come to believe that *p*: my self-knowledge is constituted in the act of engaging in a rational process, thereby understood as the sensitivity to reasons. Moreover, the self-knowledge about presently occurring beliefs acquired through this process provides me with a commitment to *p*, which I express through an *avowal* rather than through a description or self-ascription of my own thoughts[54]. Importantly, the transparency condition satisfies a desideratum of any non-behaviorist account of self-knowledge, namely, its *immediacy* – for it is the result of avowing our beliefs, and not of inferring their presence through observation. Another important consequence of this view is that it explains why the theoretical stance and the inner-sense mechanism it posits cannot be

[53] In this sense, thus, transparency is not to be confused with luminosity (or self-intimation), the notion that one's mental states are given to the individual.

[54] The scope of deliberative self-knowledge is initially restricted to present-tense beliefs, but Moran later tries to expand the view to include the occurrence of all judgement-sensitive attitudes, such as certain desires (2001: 115-120).

the fundamental source of self-knowledge, for beliefs acquired through a *quasi*-perceptual process cannot be avowed:

> A belief that cannot be avowed is thus cognitively isolated, unavailable to the normal processes of review and revision that constitute the rational health of belief and other attitudes. Thus, we could explain why it is that the capacity not just for awareness of one's beliefs, but specifically awareness through avowal, is both the normal condition and part of the rational well-being of the person. (2001: 108)

5.5. Know-how and Self-knowledge

Moran's account captures an important insight about self-knowledge, namely, that it cannot be a purely theoretical stance towards one's thoughts, because there is a practical, deliberative dimension which is essential to knowing oneself. Hence Moran's claim that self-knowledge, 'is not purely a theoretical or epistemic matter.' (56). On the other hand, however, the emphasis put on deliberative processes and on the articulation of reasons in forming beliefs gives rise to a plausible line of criticism, that is, that Moran's account assumes a strong form of intellectualism (Gertler 2010, Carman, 2010) and that it confuses beliefs and judgements (Cassam, 2010). Gertler argues that since deliberation is a diachronic process, the end-result is the formation of a belief or judgement that was not there when the deliberation initially took place. The answer to whether I believe that *p* by following the transparency method may result in the formation of a judgement that *p*, but that is not the answer for whether I *believed* that *p* when the question arose. Similarly, Cassam points out that judging that *p* after considering the reasons for accepting *p* does not guarantee that I believe that *p*, and could only do so on the basis of some further evidence, say, that judgements normally imply beliefs. This would imply that self-knowledge is not epistemically immediate, for it would require an inferential structure. The alternative is to claim that beliefs simply are judgements, which is, again, an intellectualist move.

Charges of excessive intellectualism point in the right direction, and it is easy to see why. Moran implicitly subscribes to the idea that rationality consists in the articulation of certain contents (one's reasons for believing that *p*), which is manifested in the deliberative process that gives rise to a judgement. That rationality is necessarily an articulation of contentful states is something that the radical enactivist is entitled to reject. But to follow the radically enactive line suggests that self-knowledge is a display of an ability or set of abilities, a form

of *know-how*. Thus, we can agree that self-knowledge has a practical dimension, as Moran rightly notices. But it does not follow that self-knowledge does not have an epistemic dimension as well as a practical one, at least insofar as we do not equate that epistemic dimension with a descriptive or observational stance.

By combining a radical enactivist view with a constitutive/transparent account of self-knowledge, we are able to preserve Moran's insight that there is an outward direction of self-knowledge without entailing some form of excessive intellectualism. For self-knowledge is explained, in this combined account, through the fact that mental states present themselves as *action-orienting*. By taking the presence of a mental state to be action-orienting, and taking the access to a mental state as *knowing how* to engage in the relevant actions, we also preserve the idea that self-knowledge has a fundamental practical dimension which is not necessarily the outcome of a deliberative process. The rationality which is constitutive of self-knowledge thus promotes a successful engagement with one's own beliefs, inclinations, desires (and so on) through one's actions, and not exclusively through deliberation. Importantly, as critics have pointed out, deliberative processes do form well-grounded judgements, and we may concede that those judgements qualify for self-knowledge, but only because they exhibit a very specific kind of ability, namely, knowing how to reason. Thus, the link between self-knowledge and rationality lies first and foremost in the possibilities of practical engagement that are open to a person who knows how to access her own mind. To say that self-knowledge is action-oriented is to say that it is essentially *prospective*. I suggest we take self-knowledge to exhibit the following triadic structure in its prospective direction: *S has knowledge of the presence of a mental state M of S if S knows how to engage in M-related actions.*

But that is not the whole story, given the very radical enactivist idea. If the relations we maintain with the environment and other persons are dynamical, the resulting picture is that the occurrence of mental states is dispersed through the events unfolding through our actions. Mental states, therefore, are *action-oriented* as well. So self-knowledge is at least partially *retrospective*, in the sense that it takes into account the relations between our past behaviors, dispositions and belief-forming inclinations. This is why self-knowledge is sometimes hard to achieve, despite its appearance of effortlessness, for it involves learning about oneself, learning how one acts and reacts to determinate circumstances. In order to dispose of the misleading appearance of lack of effort sometimes associated with self-knowledge, consider

the act of tying your shoelaces. It seems easy enough, something most adults are able to do effortlessly. But to master this very simple act took us patience and exercise when we were children, and can be very difficult to achieve for someone with motor impairments. Something similar happens with self-knowledge, it is not *given*, it is the outcome of a skillful access[55]. It may seem that I know how I feel, say, with jealous, without much effort, but to access the presence of jealously is something I have mastered by tracking my behavior in relevant circumstances. The retrospective and prospective dimensions are tied together by a know-how: *knowing how I act and how I should act in the presence of a mental state*.

To consider an example, let us borrow once more from Evans. Knowing that I believe that a third world war is going to happen is knowing how to proceed in such circumstances (build a shelter, stock canned foods, etc.) and effectively doing something in accordance. Although not engaging in these actions is possible, as it is almost always possible to act in dissonance to one's known beliefs; but doing so would seem irrational for an external observer. In some cases I might acquire the relevant piece of self-knowledge by answering a deliberative question, say, considering what the UN said about it and if a NATO member was invaded, etc. Doing so, however, is relevant to self-knowledge only insofar it displays a specific, refined form of knowing how – as we mentioned, knowing how to reason, which consists in being sensitive to new evidences, withholding beliefs when necessary, inferring correctly etc. And just like before, the self-knowledge thus acquired is action-orienting.

We can consider more uneventful cases of self-knowledge as well. Knowing, for instance, that I believe that all swans are white is knowing how to engage in the relevant actions, namely: answering in the affirmative if someone asks me, discriminating (what I take to be) swans from non-white birds, revising the relevant beliefs in the face of evidence to the contrary, and so on. If my actions betray the commitments I set when I access my belief, then I am prone to accusations of irrationality, and rightly so. Naturally, other kinds of mental states can be accounted for in the same way, such as knowing that one is hungry and knowing that one wants to go for a swim.

[55] Thus, this account does not imply that mental states and events are luminous – in fact, it is inconsistent with luminosity so conceived. Our minds can be, and frequently are, completely opaque to ourselves if we lack the requisite know-how.

Before moving on to the topic of other minds, there are two objections to consider. First, there is an imminent threat of behaviorism to the radically enactive view of self-knowledge, for it emphasizes the role played by one's actions in knowing what one's mental states are. But accusations of behaviorism are ungrounded, because the individual does not observe her own behavior and infers the presence of a mental state. Instead, in this view, she access it directly by her know-how, which was acquired and refined through previous interactions. Importantly, in doing so the individual sets the correct course of action in accordance with her known beliefs, which is something no one else can do for her. In other words, the radical enactivist view does accommodate the intuition that there is a privileged access which is characteristic of self-knowledge. Therefore, insofar as behaviorism implies that there is no fundamental difference between self-knowledge and knowledge of other minds (other than the privileged position one occupies in order to observe one's own behavior), this view is actually incompatible with behaviorism.

Simply put, the second objection is that there is no phrase in English to capture the idea of "self-knowledge-how". We normally say 'I know *that* I believe that *p*', but it seems too far-fetched to say 'I know *how* I believe that *p*' (and it is not clear what that would mean). Therefore, to analyze self-knowledge in terms of an ability or a know-how seems not to do justice to what we normally take self-knowledge to be, namely, the objection goes, a representational mode of access to our own mind. My reply is that we can grant the premise without conceding the conclusion. The key here is to note that linguistic expressions of self-knowledge usually arise in response to certain conversational challenges. In order to answer to a conversational challenge, one has to direct one's attention towards one's self-knowledge and put it into words. Plausibly, the high-level of attention leads to a propositional (but more fundamentally, to a representational) articulation of the events that were already in place. That is, one's skillful access to one's own mental states becomes the object of representational awareness. Now, one could object that this answer brings back representations as an explanation of how self-knowledge is verbalized, and that this is incompatible with radical enactivism. But that is not the case, for radical enactivism eschews the ubiquity of representational content in cognition, but this does not imply that representations do not play an important role in some (high-level) cognitive performances, such as publicly avowing one's mental states, which already takes for granted some kind of access to it. Consider this analogy: we may say that I perceive a hen with 43 specks when I take a quick look at one, but

we do not say that I perceive *that* a hen has 43 specks unless I am paying attention to and keeping track of some of its qualities. *Perceiving that* is a more sophisticated cognitive gesture than *perceiving* (*simpliciter*), at least partly because the role attention plays in the former. Nonetheless, I could not perceive that a hen has a certain number of specks without perceiving a hen in the first place. Something analogous happens when we verbalize our self-knowledge, we focus on our know-how through "representational lenses", so to speak, but this does not necessarily captures its underlying structure.

5.6. Other Minds

Preserving the privileged access intuition might come with a high price, namely, creating an insurmountable gap between one's own mind and the minds of others. That is clear when we consider sense-data accounts of self-knowledge, according to which the objects of self-knowledge are luminous (one cannot fail to form a judgement about their presence) and one's access to them is infallible (one's judgement about them cannot be false). Privileged access in its finest. Therefore, if knowing one's own mental states is the model through which we interpret knowing mental states more generally, including mental states of others, then mental states are robustly private according to the sense-data account, and we simply cannot reach out to other minds. I want to conclude this chapter by pointing out that the radical enactive approach to self-knowledge offers a plausible view on how we come to know other minds by knowing how to engage with the mental states of others – and, by doing so, this account is free of the worries about an insurmountable gap.

The fundamental difference between self and alter-knowledge is that we can *make our own minds*, as Moran rightly points out, in knowing how to engage with our mental states by performing the relevant actions, whereas we do not enjoy decisive power and commitment over the mental states of others. In perceiving what you intend to do, say, to pick something on the other side of the dinner table, I cannot carry out *your* action for you, but I can anticipate it. It might be tempting to interpret cases like this as suggesting some kind of theory theory or some kind of simulation theory. Both these views, however, assume that knowledge of other minds cannot be accessed directly, so that the mental states of others have to be either inferred through observation plus theoretical beliefs (theory theory), or simulated by some instrumental processes internal to the observer (simulation theory) (Gallagher & Varga, 2014). Radical enactivism, as one would expect, favors a direct approach to other minds.

The radical enactivist view finds support in the resonance of mirror neurons (MNs), which are located in the premotor cortex and the parietal cortices and are usually regarded as the most plausible candidates of how we come to know other minds. The MNs response occurs when a subject observes someone engaging in an action, in the same way MNs are activated when the subject herself performs an action – they are, therefore, essential to motor behavior and "subject neutral". This is why mirroring processes may seem specially fitting for a simulation theory, according to which the observer:

> Creates in herself pretend states intended to match those of the target […] The second step is to feed these initial pretend states into some mechanism of the attributor's own psychology […] and allow that mechanism to operate on the pretend states so as to generate one or more new states. Third, the attributor assigns the output state to the target. (Goldman, 2005: 80-1)

However, argues Gallagher (2008), mirroring processes also display motoric states of complementary and anticipatory actions, so they do not *match* the mental states of others in building an instrumental model of them. Moreover, the very subject neutrality exhibited by the MNs suggests that they 'do not involve pretense, which requires distinguishing one agent (me) from another (you). There is no I or you registered in MNs, per se' (Gallagher, 2008: 448). Therefore, insofar as the mirror-neuron system does not *register states of others*, it does not play the role that simulationists ascribe to it.

The alternative is to construe the activation of mirror areas not as input to a simulation of mental states of others, but as essential to social interactions in the second person (therefore, not in the typical observational stance of the third person).

> In contrast to an internalist/simulationist interpretation of MN activation, the enactivist view conceives of MN activation not as subserving an act of mindreading, but as something that is intrinsic to the structure of perception – my perception being shaped by my own action possibilities – what I *can do* in response to the other. (Gallagher & Varga, 2014, p. 190)

According to this construal, the activation of MNs is attuned to intentional action (Gallese 2006), which enables the *direct perception of possibilities of social interaction*. So understood, MNs provide an explanation of the phenomenon of joint action, that is, shared co-operative activities in which two or more autonomous agents co-regulate their actions and intentions (Newman-Norlund et al., 2007). Precisely because the mirror-neuron system

enables the anticipation of complementary actions of other individuals, their responses are sufficiently malleable in order to detect errors prior to their occurrence, whereas error-detection in adaptive behavior is central to learning. If our mirroring processes enable our perception of other persons' mental states and are involved in adaptive learning, then the radical enactive construal of the role of MNs offers good support to the idea that *we learn how to engage with other minds through practice and social interaction*. De Jaegher, Di Paolo and Gallagher are explicit: 'social cognition […] involve[s] the *know-how* that allows us to sustain interactions, form relations, understand each other, and act together.' (2010: 442, my italics).

That we primarily *know how* to engage with other minds by perceiving possibilities of interaction is not to say that we never come to (or have to) *know that* other persons are thinking by interpreting their behavior. This might indeed be the case when someone acts unexpectedly, or when one finds oneself in unusual circumstances (say, as an observer in an impromptu play). In regular cases, on the other hand, in the same way that we directly perceive our environment as offering possibilities of action, we directly perceive other minds as offering possibilities of interactions. In this view, we access the environment and the minds of others directly by engaging with them, with no need of postulating mental models and folk-psychological theories. If a challenge calls for our attention (and the subsequent observational inferences), then we enter a more sophisticated, contentful cognitive relation, but this is not nearly as common as epistemologists sometimes suggest. Consider, for example, how we can easily know how someone else is feeling if we are fairly well known to each other. We can even discriminate complex patterns of emotions and subtle intentions without observing and inferring, which might not be as easy if we are merely acquainted (in the colloquial, non-Russellian use of the phrase). The idea here is that knowing other minds is a matter of engagement and practice, just like knowing one's own mind.

5.7. Concluding Remarks

My aim in this chapter is to explore a radical enactive approach to self-knowledge. In order to do so, I argued that the enactivist has to construe embodied abilities as displays of know-how and rationality as an emergent quality which is already at work in perceptual cognition. By doing so we can counter Shoemaker's claim that self-knowledge is radically different from perceptual knowledge and, more importantly, we can block the conclusion of the self-blindness argument. . This strategy, however, vindicates Shoemaker's insight, namely, that

there is a constitutive relation between self-knowledge and its intentional constituents. I explored Moran's transparency account with the adjustments mandated by radical enactivism, and the resulting picture is that self-knowledge is a form of know-how to make up one's own mind. A significant difference between self and alter-knowledge remains, thus avoiding behaviorism, but without putting too much weight into the idea of privileged access, thus avoiding solipsism. It remains an open possibility whether *the self* itself (no pun intended) can be construed in a radically enactive manner, an interesting idea that we should investigate in future occasions.

Conclusão

Eu pretendi oferecer uma motivação e uma defesa do disjuntivismo epistemológico como a melhor solução ao paradoxo cético da subdeterminação. Como eu enfatizei no começo, minha estratégia aqui consiste em aceitar de partida que nós temos conhecimento, especialmente conhecimento racionalmente fundado, do nosso em torno. O problema com o disjuntivismo epistemológico é que, por si só, ele é insuficiente para enfrentar hipóteses céticas moderadas, como a representada pelo argumento do sonho. A tarefa de explicar como nós somos capazes de discriminar entre perceber e sonhar nos levou ao enactivismo radical sobre cognição perceptual, o que oferece, em conjunção com o disjuntivismo, uma posição mais robusta contra o ceticismo.

Agora, uma concepção radicalmente enactivista da percepção tem como consequência que a cognição não é algo a ser acrescentado a uma camada básica de interação com ambiente. Segundo o enactivismo radical, a cognição envolve e orienta essa interação integralmente. Racionalidade, sendo uma qualidade central da cognição de certos agentes, é concebida então não como uma operação formal a ser acrescentada aos resultados da percepção, mas como uma operação que orientada a aquisição de estados perceptuais através da agência. Segue-se que a racionalidade é uma qualidade mais mundana do que filósofos geralmente assumem. A racionalidade deve servir para explicar, naturalmente, casos paradigmáticos de raciocínios bem-sucedidos, mas ela também deve servir para explicar interações prolíficas com o ambiente sem postular conteúdo representacional. Há, portanto, um papel importante desempenhado pela ação não apenas na percepção, mas também na manutenção de estados racionais.

Esta pesquisa deixa em aberto os três seguintes pontos: primeiramente, embora eu tenha esboçado como conhecimento racionalmente fundado é dependente das nossas ações no ambiente, muito ainda deve ser feito para especificar quais normas epistêmicas emergem a partir das nossas ações (assumindo, naturalmente, que racionalidade e conhecimento sejam conceitos normativos). Eu antecipei um pouco deste trabalho em Rolla (2014), mas aquela resposta foi certamente insuficiente, e o ponto merece mais atenção em pesquisas futuras. Naturalmente, uma concepção tradicional tem a vantagem da partida, pois o conjunto de argumentos válidos, aos quais inferências devem conformar-se para que sejam consideradas

bem sucedidas, é bem delimitado. Uma possibilidade de norma de comportamento pode ser o que Todd e Gigerenzer chamam de *heurística de olhar fixo*, isto é, uma estratégia simples que humanos usam para pegar certos objetos: "fixe o seu olhar na bola, comece a correr e ajuste sua velocidade de tal forma que o ângulo de olhar fixo permaneça constante" (Todd & Gigerenzer, 2012, 7).

Em segundo lugar, e de modo relacionado, a pesquisa futura deve procurar estabelecer quais padrões de atividade são relevantes para a emergência de estados conceitualmente articulados. Note que isso é uma questão diferente da anterior. Um problema é investigar quais outras normas além da heurística de olhar fixo são características da nossa agência racional. Outro problema consiste em dizer como certos padrões de atividade dão origem a estados cognitivos mais complexos. No panorama enactivista radical, essa investigação deve versar sobre como o exercício de habilidade sensório-motoras dá origem a estados proposicionais – isto é, sobre como surgem crenças perceptuais. Eu argumentei que a atenção desempenha um papel fundamental nessa transição, mas disso não se segue que ela seja suficiente. Esse é um ponto em aberto que merece ser investigado de modo ao menos parcialmente empírico.

Em terceiro lugar, e esse ponto é muito mais preocupante, o que podemos dizer do conhecimento perceptual racionalmente *infundado*? O problema surge para a nossa concepção enactiva e corporificada da racionalidade, mas não para a concepção internalista tradicional, segundo a qual racionalidade é uma operação formal, essencialmente ligada ao raciocínio, que consiste no processamento de certos dados. Na visão tradicional, o conhecimento perceptual torna-se racionalmente fundado na medida em que a percepção oferece material para raciocínios bem sucedidos, por exemplo, em um caso minimalista, a percepção de que *p* serve de razão para asseverar que *p*. Casos em que a percepção é alheia a raciocínios subsequentes, casos em que a percepção não é acompanhada do esforço cognitivo adicional, são facilmente identificados, na concepção tradicional, como conhecimento perceptual racionalmente *infundado*, ou meramente externalista. A imagem que eu explorei neste trabalho, diferentemente, não deixa espaço para essa possibilidade, pois o conhecimento perceptual mais básico já é ele mesmo racionalmente fundado, pois pressupõe o exercício de habilidades sensório-motoras, e a racionalidade é entendida como uma habilidade que mantém e aprimora o engajamento perceptual. Portanto, embora eu tenha pretendido manter-me neutro com respeito à controvérsia entre internalistas e externalistas sobre conhecimento (aceitando

apenas que deve haver conhecimento internalista, mas não que esse seja *todo* conhecimento), talvez a posição aqui explorada seja estritamente internalista. Em outras palavras, não parece haver espaço, nesta imagem, para fazer sentido da ideia de que possa haver conhecimento sem a interferência da racionalidade. Se esse for o caso, 'conhecimento racionalmente fundado', portanto, é uma expressão que se torna perigosamente redundante.

Embora a biografia do autor seja de menor relevância para o valor de uma obra filosófica, eu concluo com uma observação geral sobre o movimento teórico deste texto, que também representa o progresso dos meus interesses de pesquisa. Eu pretendi, com este trabalho, combinar um tratamento recente de um problema clássico da epistemologia com uma filosofia da mente empiricamente informada. As razões para essa combinação são duas, a primeira delas é estritamente teórica: como mencionei, o disjuntivismo epistemológico enfrenta uma dificuldade com respeito ao problema cético do sonho. A segunda razão é uma crença pessoal: não duvido – não seria possível duvidar – de que há muitas investigações epistemológicas valiosas a serem feitas de acordo com os procedimentos tradicionais (experimentos mentais, testes de intuições, formulação de princípios, etc.). Eu acredito, contudo, que a epistemologia torna-se uma disciplina ainda mais prolífera se contemplada de uma perspectiva mais ampla. A ampliação de perspectiva resulta da promessa de que certos limites que dividem os nossos inquéritos são superficiais e que ganhamos ao superá-los, uma promessa que eu comecei a cumprir neste trabalho.

Bibliography

Adams, F., and K. Aizawa. 2010. “Defending the Bounds of Cognition.” In *The Extended Mind*, edited by Richard Menary, 67–80. Cambridge, Massachusetts: MIT Press.

Adams, F., and K. Aizawa. 2001. “The Bounds of Cognition.” *Philosophical Psychology* 14: 43–64.

Alston, William. 1988. “An Internalist Externalism.” *Synthese* 74: 265–83.

Alston, William. 1988. “The Deontological Conception of Epistemic Justification.” *Philosophical Perspectives* 2: 257–99.

Armstrong, David. 1968. *A Materialist Theory of the Mind*. London: Routledge & Kegan Paul.

Austin, J. L. 1970. “Other Minds.” In *J. L. Austin: Philosophical Papers*, edited by J. O. Urmson and G. J. Warnock, 76–116. London: Oxford University Press.

Austin, J. L. 1962. *Sense and Sensibilia*. London: Oxford University Press.

Ayer, Jules. 1940. *The Foundations of Empirical Knowledge*. London: The MacMillian Press Ltd.

Boyle, Matthew. n.d. “Additive Theories of Rationality: A Critique.” *European Journal of Philosophy*. http://nrs.harvard.edu/urn-3:HUL.InstRepos:8641840.

Brewer, Bill. 2003. *Perception and Reason*. Oxford: Oxford University Press.

Brueckner, Anthony. 1994. “The Structure of the Skeptical Argument.” *Philosophy and Phenomenological Research* 54 (4): 143–59.

Burge, Tyler. 1988. “Individualism and Self-Knowledge.” *Journal of Philosophy* 85: 649–63.

Byrne, Alex. 2005. “Introspection.” *Philosophical Topics* 33 (1): 79–104.

Carr, David. 1981. “Knowledge in Practice.” *American Philosophical Quarterly* 18 (1): 53–61.

Cassam, Quassim. 2010. “Judging, Believing and Thinking.” *Philosophical Issues2* 20 (Philosophy of Mind): 80–95.

Chemero, Anthony. 2009. *Radical Embodied Cognitive Science*. Cambridge, Massachusetts: The MIT Press.

Cianciolo, Anna T., and Robert J. Sternberg. 2004. *Intelligence - a Brief History*. Malden: Blackwell Publishing.

Clark, Andy. 1997. *Being There*. Cambridge, Massachusetts: MIT Press.

Clark, Andy. 2009. “Spreading the Joy? Why the Machinery of Consciousness Is (Probably) Still in the Head.” *Mind* 472 (118): 964–93.

Clarke, Thompson. 1965. “Seeing Surfaces and Physical Objects.” In *Philosophy in America*, edited by Max Black, 98–114. Allen & Unwin.

Cruz, Joseph, and John Pollock. 1999. *Contemporary Theories of Knowledge*. Oxford: Rowman & Littlefield Publishers.

De Jaegher, Hanne, Ezequiel Di Paolo, and Shaun Gallagher. 2010. “Can Social Interaction Constitute Social Cognition?” *Trends in Cognitive Sciences* 14 (10): 441–47. doi:10.1016/j.tics.2010.06.009.

Dretske, Fred. 1970. “Epistemic Operators.” *The Journal of Philosophy* 67 (24): 1007–23.

Dreyfus, Hubert. 2007. “The Return of the Myth of the Mental.” *Inquiry* 50 (4): 352–65.

Dreyfus, Hubert. 1991. *Being-in-the-World: A Commentary on Heidegger’s Being and Time, Division I*. Cambridge, Massachusetts: MIT Press.

Evans, Gareth. 1982. *The Varieties of Reference*. Edited by John McDowell. Oxford: Clarendon Press.

Fabry, Regina E. 2015. “Enriching the Notion of Enculturation: Cognitive Integration, Predictive Processing, and the Case of Reading Acquisition.” In *Open MIND*, edited by Thomas K Metzinger and Jennifer M Windt. Frankfurt am Main: MIND Group. doi:10.15502/9783958571143.

Faria, Paulo. 2009. “Unsafe Reasoning: A Survey.” *Dois Pontos* 6 (2): 185–201.

Ffytche, Dominic H. 2013. “The Hallucinating Brain: Neurobiological Insights into the Nature of Hallucinations.” In *Hallucination: Philosophy and Psychology*, edited by Fiona Macpherson and Dimitris Platchias, 45–64. Cambridge: The MIT Press.

Fumerton, Richard. 2005. “Speckled Hens and Objects of Acquaintance.” *Philosophical Perspectives* 19: 121–38.

Gallagher, Shaun. 2008. “Understanding Others: Embodied Social Cognition.” In *Handbook of Cognitive Science: An Embodied Approach*, edited by Paco Calvo and Toni Gomila, 439–52. Amsterdam: Elsevier.

Gallagher, Shaun, and Varga Somogy. 2014. “Social Constraints on the Direct Perception of Emotions and Intentions.” *Topoi*, no. 33: 195–99.

Gallese, Vittorio. 2006. “Intentional Attunement: A Neurophysiological Perspective on Social Cognition and Its Disruption in Autism.” *Brain Research* 1079 (1): 15–24. doi:10.1016/j.brainres.2006.01.054.

Gertler, Brie. 2010. “Self-Knowledge and the Transparency of Belief.” In *Self-Knowledge*, edited by Anthony Hatzimoysis, 125–45. New York: Oxford University Press.

Gettier, Edmund. 1963. “Is Justified True Belief Knowledge?” *Analysis* 23 (6): 121–23.

Gibson, J. J. 2015. *The Ecological Approach to Visual Perception*. New York: Psychology Press.

Goldman, Alvin. 2005. “Imitation, Mind Reading and Simulation.” In *Perspectives on Imitation II*, edited by S. Hurley and N. Chater, 79–93. Cambridge, Massachusetts: MIT Press.

Goldman, Alvin. 1976. “Discrimination and Perceptual Knowledge.” *Journal of Philosophy* 73: 771–91.

Haddock, Adrian, and Fiona Macpherson. 2008. “Disjunctivism: Perception, Action, Knowledge.” Oxford: Oxford University Press.

Haken, H., J. A. S. Kelso, and H. Bunz. 1985. “A Theoretical Model of Phase Transitions in Human Hand Movements.” *Biological Cybernetics* 51 (5): 347–56. doi:10.1007/BF00336922.

Hetherington, Stephen. 2011. *How to Know - a Practicalist Conception of Knowledge*. Malden: Wiley-Blackwell.

Hinton, J. M. 1967. “Visual Experiences.” *Mind* 76 (302): 217–27.

Humphreys, Paul. 1997. “How Properties Emerge.” *Philosophy of Science* 64.

Hurley, Susan. 2001. “Perception and Action: Alternative Views.” *Synthese* 129: 3–40.

Hutto, Daniel D., and Erik Myin. 2013. *Radicalizing Enactivism: Basic Minds without Content*. Cambridge, Massachusetts: MIT Press.

Johnston, Mark. 2004. “The Obscure Object of Hallucination.” *Philosophical Studies* 120: 113–83.

Kelly, Sean D. 2010. “The Normative Nature of Perceptual Experience.” In *Perceiving the World*, edited by Bence Nanay, 146–59. Oxford: Oxford University Press.

Kind, Amy. 2003. “Shoemaker, Self-Blindness and Moore’s Paradox.” *The Philosophical Quarterly* 53 (210): 39–48.

Kohler, I. 1951. “Formation and Transformation of the Perceptual World.” *Psychological Issues* 3 (4): 1–173.

Kornblith, Hilary. 2012. *On Reflection*. Oxford: Oxford University Press.

LaBerge, S. 2000. “Lucid Dreaming: Evidence and Methodology.” *Behavioral and Brain Sciences* 23 (6): 962–63.

Macpherson, Fiona. 2013. “The Philosophy and Psychology of Hallucination: An Introduction.” In *Hallucination: Philosophy and Psychology*, edited by Fiona Macpherson and Dimitris Platchias, 1–38. Cambridge: The MIT Press.

Marr, D. 1982. *Vision*. San Francisco: W. H. Freeman.

Maturana, Humberto, and Francisco Varela. 1980. *Autopoiesis and Cognition: The Realization of the Living*. Dordrecht: D. Reidel Publishing Company.

McDowell, John. 1998. “Criteria, Defeasibility, and Knowledge.” In *Meaning, Knowledge and Reality*, 369–94. Cambridge, Massachusetts: Harvard University Press.

McDowell, John. 1998. “Singular Thoughts and the Extent of Inner Space.” In *Meaning, Knowledge and Reality*, 228–59. Cambridge, Massachusetts: Harvard University Press.

McDowell, John. 1994. *Mind and World*. Cambridge: Harvard University Press.

McDowell, John. 2011. *Perception as a Capacity for Knowledge*. Milwaukee: Marquette University Press.

Menary, Richard. 2014. “Cognitive Integration, Enculturated Cognition and the Socially Extended Mind.” *Cognitive Systems Research* 25–26: 26–34.

Millar, Alan. 2011. “How Visual Perception Yields Reason for Belief.” *Philosophical Issues* 21 (The Epistemology of Perception): 332–51.

Millikan, R. 1995. “Pushmi-Pullyu Representations.” *Philosophical Perspectives* 9: 185–200.

Millikan, Ruth. 2009. “Embedded Rationality.” In *The Cambridge Handbook of Situated Cognition*, edited by Philip Robbins and Murat Aydede, 171–83. Cambridge: Cambridge University Press.

Moran, Richard. 2001. *Authority and Estrangement*. Princeton: Princeton University Press.

Moyal-Sharrock, Danièle. 2004. *Understanding Wittgenstein's On Certainty*. Hampshire: Palgrave Macmillan.

Neta, Ram. 2008. "In Defense of Disjunctivism." In *Disjunctivism: Perception, Action and Knowledge*, edited by Adrian Haddock and Fiona Macpherson, 311–29. Oxford: Oxford University Press.

Newman-Norlund, Roger D., Matthijs L. Noordzij, Ruud G. J. Meulenbroek, and Harold Bekkering. 2007. "Exploring the Brain Basis of Joint Action: Co-Ordination of Actions, Goals and Intentions." *Social Neuroscience* 2 (1): 48–65. doi:10.1080/17470910701224623.

Noë, Alva. 2015. "Concept Pluralism, Direct Perception, and the Fragility of Presence." In *Open MIND*, edited by Thomas K Metzinger and Jennifer M Windt. Frankfurt am Main: MIND Group. doi:10.15502/9783958570597.

Noë, Alva. 2012. *Varieties of Presence*. Cambridge, Massachusetts: Harvard University Press.

Noë, Alva. 2004. *Action in Perception*. Cambridge, Massachusetts: MIT Press.

O'Reagan, J.K, J.A. Rensink, and J.J. Clark. 1996. "'Mud Splhases' render Picture Changes Invisible." *Investigative Ophtalmology and Visual Science* 37 (3): S213.

Plantinga, Alvin. 1990. "Justification in the 20th Century." *Philosophy and Phenomenological Research* I (45–71).

Prinz, Jesse. 2009. "Is Consciousness Embodied." In *The Cambridge Handbook of Situated Cognition*, edited by Philip Robbins and Murat Aydede, 419–36. Cambridge: Cambridge University Press.

Pritchard, Duncan. 2009. "Safety-Based Epistemology: Whither Now?" *Journal of Philosophical Research* 34: 33–45.

Pritchard, Duncan. 2016. *Epistemic Angs: Radical Skepticism and the Groundlessness of Our Believing*. Princeton: Princeton University Press.

Pritchard, Duncan. 2012. *Epistemological Disjunctivism*. Oxford: Oxford University Press.

Pritchard, Duncan. 2005. *Epistemic Luck*. Oxford: Clarendon Press.

Putnam, Hilary. 1981. *Reason, Truth and History*. Cambridge: Cambridge University Press.

Ramsey, W. M. 2007. *Representation Reconsidered*. New York: Cambridge University Press.

Ramsey, W. M. 2015. "Untangling Two Questions about Mental Representation." *New Ideas in Psychology*, 1–10.

Rödl, Sebastian. 2007. *Self-Consciousness*. Cambridge, Massachusetts: Harvard University Press.

Rolla, Giovanni. 2016. "Epistemic Immodesty and Embodied Rationality." *Manuscrito* 39 (3): 5–28. doi:10.1590/0100-6045.2016.v39n3.gr.

Rolla, Giovanni. 2016. "On Envattment - Disjunctivism, Skeptical Scenarios and Rationality." *Kriterion: Revista de Filosofia* 57 (134): 525–44. doi:10.1590/0100-512X2016n13409gr.

Rolla, Giovanni. 2014. "A Puzzle about Normativity." *Principia: An International Journal of Epistemology* 18 (3): 323. doi:10.5007/1808-1711.2014v18n3p323.

Rowlands, Mark. 2010. *The New Science of the Mind, From Extended Mind to Embodied Phenomenology*. Cambridge, Massachusetts: The MIT Press.

Sacks, Oliver. 2012. *Hallucinations*. New York: Vintage Books.

Sellars, Wilfrid. 1997. *Empiricism and the Philosophy of Mind*. Cambridge, Massachusetts: Harvard University Press.

Shi, Yongsheng, and Shozo Yokoyama. 2003. "Molecular Analysis of the Evolutionary Significance of Ultraviolet Vision in Vertebrates." *Proceedings of the National Academy of Sciences* 100 (14): 8308–13. doi:10.1073/pnas.1532535100.

Shoemaker, Sydney. 1996. *The First Person Perspective and Other Essays*. Cambridge, Massachusetts: Cambridge University Press.

Silva Filho, Waldomiro. 2013. *Sem Ideias Claras E Distintas*. Salvador: EDUFBA.

Smith, A. D. 2002. *The Problem of Perception*. Cambridge, Massachusetts: Harvard University Press.

Sosa, Ernest. 2003. "Privileged Access." In *Consciousness: New Philosophical Essays*, edited by Quentin Smith, 273–92. Oxford: Oxford University Press.

Sosa, Ernest. 2007. *A Virtue Epistemology, Vol I*. New York: Oxford University Press.

Sosa, Ernest. 1999. "How to Defeat Opposition to Moore." *Philosophical Perspectives* 13: 141–54.

Sosa, Ernest. 2007. *A Virtue Epistemology - Apt Belief and Reflective Knowledge*. Vol. 1. Oxford, New York: Clarendon Press.

Stanford, Kyle. 2006. *Exceeding Our Grasp*. Oxford: Oxford University Press.

Sternberg, Robert J. 2005. "The Theory of Successful Intelligence." *Interamerican Journal of Psychology* 39 (2): 189–202.

Stratton, G. M. 1897. "Vision without Inversion of the Retinal Image." *Psychological Review* 4: 341–60, 463–81.

Stroud, Barry. 1984. *The Significance of Philosophical Scepticism*. Oxford: Oxford University Press.

Taylor, Charles. 1985. "The Concept of Person." In *Human Agency and Language: Philosophical Papers, Vol. 1*, 97–114. Cambridge: Cambridge University Press.

Taylor, J. G. 1962. *The Behavioral Basis of Perception*. New Haven: Yale University Press.

Thelen, E, G Schöner, C Scheier, and L B Smith. 2001. “The Dynamics of Embodiment: A Field Theory of Infant Perseverative Reaching.” *The Behavioral and Brain Sciences* 24 (1): 1-34-86. http://www.ncbi.nlm.nih.gov/pubmed/11515285.

Thompson, Evan. 2007. *Mind in Life: Biology, Phenomenology and the Sciences of the Mind*. Cambridge, Massachusetts: The Belknap Press of Harvard University Press.

Todd, Peter M., and Gerd Gigerenzer. 2012. “What Is Ecological Rationality?” In *Ecological Rationality*, edited by Peter M. Todd and Gerd Gigerenzer. Oxford: Oxford University Press.

Turvey, Michael, Michael Richardson, Kevin Shockley, Brett Fajen, and Michael Riley. 2008. “Ecological Psychology: Six Principles for an Embodied-Embedded Approach to Behavior.” In *Handbook of Cognitive Science: An Embodied Approach*, edited by Paco Calvo and Antoni Gomila, 161–87. Amsterdam: Elsevier.

Varela, Francisco J., Evan Thompson, and Eleanor Rosch. 1991. *The Embodied Mind*. Cambridge, Massachusetts: MIT Press.

Weinberg, Jonathan, Shaun Nichols, and Stephen Stich. 2001. “Normativity and Epistemic Intuitions.” *Philosophical Topics* 29: 429–60.

Williamson, Timothy. 2000. *Knowledge and Its Limits*. Oxford: Oxford University Press.

Wittgenstein, Ludwig. 1969. *On Certainty*. Edited by Denis Paul and G.E.M. Anscombe. Oxford: Basil Blackwell.

Wright, Crispin. 2002. “(Anti)-Sceptic, Simple and Subtle: G.E. Moore and John McDowell.” *Philosophy and Phenomenological Research* 65: 330–48.

Wright, Crispin. 2004. “Warrant for Nothing (and Foundations for Free)?” *Proceedings of the Aristotelian Society* 78: 167–212.

Wu, Wayne. 2014. *Attention*. New York: Routledge.