Understanding and disagreement in belief ascription

Víctor M. Verdejo

University College London, UK

ABSTRACT

It seems uncontroversial that Dalton wrongly believed that atoms are indivisible. However, the correct analysis of Dalton's belief and the way it relates to contemporary beliefs about atoms is, on closer inspection, far from straightforward. In this paper, I introduce four features that any candidate analysis is plausibly bound to respect. I argue that theories that individuate concepts at the level of understanding are doomed to fail in this endeavor. I formally sketch an alternative and suggest that cases such as the one presented provide support for the claim that the genuine source for concept individuation is public sharable thought.

KEYWORDS Belief ascription; concept possession; disagreement; communication; understanding; sense

1. Introduction

It is a matter of common wisdom that Dalton, the famous English chemist, falsely believed that atoms are indivisible. In spite of Dalton's other brilliant insights, he was wrong on this score. The truth of (1) is therefore uncontroversial:

(1) Dalton believed that atoms are indivisible.

Uncontroversial as it is, however, (1) conceals a rather intricate piece of philosophical work. This is shown when we consider its relation to similar ascriptions. Let us assume that John is an educated and rational fellow of our time. It is therefore likely that (2) is true:

(2) John believes that atoms are not indivisible.

In believing what (2) specifies, we fairly claim, John believes something true. But how are (1) and (2) exactly related? From a folk psychological point of view, there are four features that candidate analyses are apparently bound to respect:

(i) *Genuine attribution:* (1) and (2) express genuine (as opposed to non-literal or metaphorical) attributions of belief-attitudes with

propositional contents specified in that-clauses. Since we cannot believe propositions without the corresponding concepts, it follows that by means of (1) and (2) we are attributing to Dalton and John the constituent concepts of the proposition believed, and *inter alia*, a concept of atom. In this sense, belief ascriptions capture the conceptual repertoire and the epistemic perspective or cognitive state of subjects.

(ii) *Sameness of reference:* Dalton's and John's beliefs are about the same worldly object or kind of object, namely, atoms; and about the same worldly property or kind of property, namely, indivisibility.

(iii) *Differing understanding:* The truth of (1) reveals a rather paradoxical situation in the history of scientific development. For it is plausible to suppose that Dalton is, whatever the merits of Democritus' thinking, the (or at any rate one of the) founding father(s) of the modern concept of atom. Even so, there was something fundamentally peculiar in Dalton's understanding of atoms. He attributed to atoms the property of being indivisible. In so doing, Dalton's understanding significantly differs from ours and, in particular, from John's. The relevant difference in understanding is not, however, a mere difference in the (mis)application of an 'atom'-concept. The truth of (1) does not stem merely from the fact that Dalton incurs in a particular or accidental (mis)application of the concept. It stems from a certain (misguided) *way of thinking* about atoms. To the extent that there is such a difference in understanding, (1) and (2) involve different ways of thinking.

(iv) *Ground for disagreement:* Crucially too, the beliefs attributed via (1) and (2) are, in spite of the diverging understandings, sufficient to ground disagreement. This is shown in the apparent validity of the following inference: Premise 1. Dalton believed that atoms are indivisible; Premise 2. John believes that atoms are not indivisible; Conclusion: Dalton and John hold(held) contradictory beliefs or disagree(d) about the indivisibility of atoms. For this to be the case therefore (1) and (2) must share the relevant conceptual constituents or fundamental features of conceptual constituents as attributed to Dalton and John respectively.

I take (i)–(iv) to be extremely plausible features stemming from the folk-psychologically or intuitively correct characterization of (1) and (2) (cf. Burge, 1986, p. 716). One need not take them for granted. I will be assuming, nonetheless, that even if not apodictic, it is worth exploring how much of a philosophical challenge they actually are.

Needless to say, (1) and (2) are only a representative example of a phenomenon whose ubiquity both in scientific and ordinary contexts is hard to doubt. The presumption is thus that there are indefinitely many cases of belief-attributions for which the corresponding conditions (i)–(iv) should be respected or respected from a folk-psychological point of view.

What is the kind of approach apt to provide an analysis of (1) and (2) that respects conditions (i)–(iv)? This is the question that I set myself the task of addressing in this paper. And this is, in a nutshell, the proposed answer: Only approaches in which differences in understanding or in the way we think are not *ipso facto* differences in the thoughts we think.

This insight affects various drifts and tendencies in the literature but it would not be very sensible to try to examine them thoroughly here. Instead, I propose to state clearly the view under scrutiny, point out a couple of its most salient sources (Section 2) and then go on to discuss a series of possible and representative articulations that would seem ready-made to handle features (i)–(iv) (Section 3): Zalta's Object Theory (Zalta, 1989, 2001), Soames's cognitive propositions (Soames, 2013, 2015) and Richard's Annotated Matrices (Richard, 1990, 1993, 1995). I will argue that in spite of their complexity and precision, these sophisticated hybrids of Fregean and Russellian standpoints are unsatisfactory as correct accounts of (iv) and therefore fail to accommodate the ground for disagreement that (1) and (2) prompt.

In the fourth Section, I will offer a diagnosis of the problems faced by these developments, namely, the failure to see that it is (iv) rather than (ii) and most especially (iii) the real locus for successful concept and belief individuation. The upshot, backed with the sketch of an alternative analysis, shall be that concept and belief ascription in cases such as (1) and (2) must (a) tease apart understanding and individuation conditions and (b) allow for public, intersubjective and intertemporal concepts and beliefs. A brief conclusion will close the paper.

2. Individuation via understanding

The principle many scholars would be sympathetic to when faced with (1) and (2) is something along the lines of Individuation via Understanding (IU), for any pair of thoughts t and t', object x and understanding-driven ways w and w' of thinking about x:

> (IU) If t and t' involve distinct ways, w and w', respectively, of thinking about x, then t and t' are distinct thoughts.

As we will have the opportunity to see through various examples, there is a widespread, fairly dominant temptation to preserve IU, one that encompasses a significant assortment of approaches to content and the semantics of attitude ascription. These include neo-Fregean, neo-Russellian, possible-world and cognitive-proposition varieties. It is a large and challenging task to accurately delineate the philosophical impetus that drives embracement of IU, however. To do so is not necessary for our concerns here. Nonetheless, in the remainder of this Section, it may be helpful to briefly single out two of its most distinctive roots.

Reliance on IU or a principle in its vicinity is bolstered, in the first place, by a certain stark interpretation of Frege's criterion of distinctness for sense and

thought (Frege, 1892) and a related variability view of senses that accompanies a received interpretation of Frege (May, 2006a, 2006b). From this angle, there is little exception to the view that a subject's S thought about x must be constituted by or individuated in terms of the way or mode in which S thinks about x, including ways derived from or associated with (mis)understanding. This stark spirit governs mainstream treatments of Frege cases and other puzzles of belief ascription such as Kripke's (1979) puzzle about belief or Benson Mates's (1952) synonymity puzzle, in which rationality is preserved via the postulation of different beliefs (Verdejo, 2013). It also fits well into the influential view that the theory of meaning and thought should be conceived as a theory of understanding and concept possession (Dummett, 1975; Peacocke, 1992). On a strict interpretation of this view, different possession or understanding conditions for a given thought or constituent concept must turn on different thoughts or concepts (Higginbotham, 1998; Verdejo and De Donato, 2015).

The other pivotal thought for the acceptance of IU worth emphasizing here is found in the widespread idea that something other than identity at the level of attributed thoughts or concepts is sufficient to capture the public character of belief needed in communication (e.g., Forbes, 1987; Zalta, 1989; Richard, 1990; Fine, 2007; Chalmers, 2011; Soames, 2015). This idea is reassuring in providing the promissory notes for an account of communication that, in accordance with IU, sidesteps strict thought sharing.

These trains of thinking no doubt nourish IU. The thesis may be also present or fueled in other ways. What matters for present concerns is that IU forces us to individuate John's and Dalton's thoughts at the level of their difference in understanding and then go on to provide a story about how communication and disagreement is possible nonetheless. In what follows, and through the analysis of various representative examples, I endeavor to show that, as a matter of principle, this kind of strategy is doomed to fail.

3. Three accounts

Once (1) and (2) are glossed as involving different beliefs in accordance with IU, there are a number of analyses that would seem ready to handle (i)–(iv) head-on. Here, I will confine attention to three carefully developed accounts that offer rather subtle, albeit disparate, combinations of Fregean and Rusellian accounts of belief ascription due to Edward Zalta (1989, 2001), Scott Soames (2013, 2015), and Mark Richard (1990, 1993, 1995), respectively. Let us begin with Zalta's theory of abstract objects.

3.1. Concepts as abstract objects

According to Zalta, senses and modes of presentation more generally can be understood in terms of abstracta as stated in his object theory (OT henceforth).

OT axiomatizes the existence of abstract individuals, properties and relations which differ from ordinary (i.e., possibly spatio-temporal) individuals, properties and relations in that the former rigidly encode the properties that ordinary individuals, properties and relations typically exemplify. Encoding is a form of predication of properties distinctive of abstract objects, whereas exemplification is a form of predication characteristic of both ordinary and abstract objects. For instance, the sense of 'Socrates' is an abstract object that rigidly encodes many properties that the individual Socrates exemplifies, such as the property of being a man or being Greek. In virtue of this 'encoding-exemplifying' relation, abstract objects are said to represent the (complex or simple) ordinary objects whose properties they encode (Zalta, 1989, p. 459; 2001, p. 342).

Zaltian attitude reports are therefore typically ambiguous between a *de re* and a *de dicto* reading. *De re* readings consist of the familiar Russellian propositions involving ordinary individuals, properties and relations, whereas the *de dicto* readings involve abstract complexes and constituents. These abstracta encode the properties that a subject associates with the corresponding expressions and are key to provide individuation of concepts at the level of (iii) since, given a predicate, the approach analyses 'the sense of that predicate, relative to some person, as a concept by which that person conceives of the property or relation denoted by the predicate' (Zalta, 2001, p. 335).[1] OT allows claiming, for instance, that whereas Dalton's concept of atom encodes the property of being indivisible, John's concept encodes the property of being divisible and thus that John's and Dalton's concepts are distinct. However, once one has bought into capturing (iii) in this way, one seems pretty much at a loss for complying with (iv) as well.

Supporters of OT can offer a decent response to this. In a way that was brilliantly anticipated in Zalta's account, OT provides a candidate way for capturing (iv) by means of the notion of *truly/falsely believing*. Zalta observes (Zalta, 1989, pp. 461–2) that the sentence, say, '*K* believes that Socrates is wise' should be analyzed, with respect to the expression 'Socrates', as involving (attribution of) the concept s_K to *K*, that is to say, (attribution of) the abstract individual associated with 'Socrates' (and which encodes properties that Socrates exemplifies) by *K*. However, whether *K* actually believes something true or false is answerable *only* to the singular proposition that the *de dicto* (intermediate) proposition *represents* and remarkably not to the *de dicto* proposition itself (Zalta, 1989, p. 462). The notion of truly/falsely believing is defined thus: *x* truly believes that φ iff B (x, φ) and φ^*, where φ^* is the result of removing all of the [Fregean-sense] underlines and subscripts from φ (Zalta, 1989, p. 462).[2]

This notion has a crucial role in providing a clear sense in which two subjects have the 'same belief '. In particular, Zalta's idea is that two subjects should be understood as having the same belief depending on the corresponding Russellian proposition and very much not on the (in some cases blatantly differing) *de dicto* (intermediate) propositions (Zalta, 1989, p. 465 fn. 6).

Going back to (1) and (2), then, there is a sense in which Dalton and John differ with respect to their beliefs – viz. they are attributed different *de dicto* propositional constituents – but they are nonetheless genuinely disagreeing because their *de dicto* propositions *represent* contradictory Russellian propositions. Let '*a*' and '*I*' denote the senses associated with 'atom' and 'indivisible', respectively and '*Ia*' stand for the result of their predicational combination.[3] Following Zalta's 2001 notation, the propounded full regimentation is as in ($1^{\dagger}$) and ($2^{\dagger}$):

($1^{\dagger}$) B (d, [λ Ia_{d}]) & $\neg Ia$
($2^{\dagger}$) B (j, [λ $\neg Ia_{j}$]) & $\neg Ia$

($1^{\dagger}$) asserts that Dalton (d) falsely believes, via the *de dicto* belief expressed with lambda notation where Dalton's concepts feature, that atoms are indivisible (Ia_{d}); whereas ($2^{\dagger}$) attributes to John (j) the true belief that atoms are not indivisible by means of the *de dicto* proposition constituted by his concepts (Ia_{j}). But this analysis cannot be correct. For Zalta's analysis to go through, it must be a *sufficient* ground for disagreement that two subjects contradict each other with respect to their *de re* Russellian beliefs (the ones represented by their *de dicto* intermediate propositions). OT theorists would probably not be alone in assuming this.[4] But this assumption is untenable. Let us abbreviate the notion of truly/falsely believing via the 2-place B* relation. The key principle tacitly endorsed here is therefore something like (DIS):

(DIS) If B* (*S*, *p*) and B* (*S'*, $\neg p$), where *p* is a Russellian or purely referential proposition, then *S* and *S'* disagree.

Supporters of analyses along the foregoing lines might be misled by the more plausible converse of (DIS), namely, that if two people disagree then they typically (truly/falsely) believe contradictory Russellian propositions. But they need to rely on (DIS), and not on the more plausible converse of (DIS), in order for them to accommodate (iv). Alas, (DIS) is clearly false. The perfect counterexamples to (DIS) are the classical Frege cases in which one and the same rational subject may believe a given proposition while rejecting or doubting the truth of a co-referential proposition. The key idea is that one of the ways in which one may reject a given proposition *p* is by (truly/falsely) believing not *p*.

Consider the classic Hesperus-Phosphorus example. If we, as we should, assume that rational subjects do not disagree with themselves, cases in which *S* believes that Hesperus is Hesperus *and* that Hesperus is not Phosphorus should not be taken as involving disagreement.[5] However, these are clear cases in which *S* believes contradictory Russellian propositions of exactly the sort we are considering. Hence, (DIS) is false. The example does not need to rely on a reflexive case although the reflexive case makes the point near to obvious. Indeed, one of the corollaries of the Frege cases seems to be that two subjects contradicting each other with respect to the Russellian proposition

associated with their beliefs are not however necessarily disagreeing: That a subject believes that Hesperus is Hesperus does not rationally, let alone conversationally, require denial, disapproval or doubt that Hesperus is not Phosphorus unless she is acquainted with the fact or has evidence to the effect that Hesperus *is* Phosphorus. If sound, these considerations show that ($1^{\dagger}$) and ($2^{\dagger}$) fall short of capturing a genuine way in which Dalton and John disagree: They differ only in what they (truly or falsely) believe but this does not guarantee the sort of *genuine* disagreement (iv) demands.

3.2. Cognitive propositions

It might be thought that OT's failure to conform to disagreement may be overcome by bringing out new conditions for the sufficiency of disagreement to be added to contradiction at the level of Russellian propositions. Scott Soames (2013, 2015) can be seen as providing an articulation of this idea in terms of the identification of enriched cognitive propositions.

Cognitive propositions are mental act types which make available a number of new analyses and solutions that need not concern us here. For present purposes, it suffices to stress that they involve semantic or representational content (which imposes conditions on their truth) as well as cognitive content (which imposes conditions on how agents have to cognize the proposition) (Soames, 2013, 2015, Ch. 2). Unlike Russellian propositions, cognitive propositions are individuated at the level of cognitive content or mode of presentation. Unlike Fregean propositions, they allow us to see understanding as a pragmatic enrichment to be excluded from semantic or representational content (Soames, 2013, 2015, Ch. 4).

Now, although the requisites of understanding are not always easy to characterize precisely, it is an assumption of this approach that differences in understanding of a term typically result in differences regarding the performed proposition at the level of its cognitive content or pragmatic enrichment. Soames observes that 'to understand a term is to have the knowledge and recognitional ability to use it to communicate in ways widely presupposed in the linguistic community' (Soames, 2013, p. 490). For instance, to understand 'Hesperus'/'Phosphorus' requires knowing that the term stands for something visible in the evening/morning. The account applies also to natural kind terms. To understand 'water', for instance, is said to require 'knowing such obvious facts as that it stands for something that can take the form of a colorless drinkable liquid, something that falls from the rain, and so on' (Soames, 2013, p. 490; see also Soames, 2015, Ch. 4).

It is only natural to suggest, therefore, that cognitive acts attributed to Dalton and John as expressed in (1) and (2) involve strictly distinct cognitive performances, as they reflect differences in Dalton's and John's understanding of 'atom'. This of course need not affect semantic or representational content. The analysis

of the case in terms of cognitive propositions leads us to the consideration of four predicative acts:

(1a) λx (x believes that *Ia*) d
(1b) λx (x believes that Ia_d) d
(2a) λx (x believes that ¬*Ia*) j
(2b) λx (x believes that ¬Ia_j) j

(1a) and (2a) capture the plain semantic or representational content of Dalton's and John's beliefs whereas (1b) and (2b) include representationally identical cognitive propositions that demand, respectively, cognizing the indivisibility of atoms in Dalton's and John's differing ways, namely, the ones associated with the differing understandings of 'atom' highlighted in (iii). So far, there is no significant departure from the Zaltian model since (1a)–(2b) correspond, mutatis mutandis, to Zaltian *de dicto* and *de re* interpretations of belief reports. Nonetheless, according to Soames, there is a way in which communication can be preserved that, on the one hand, goes beyond sameness at the level of Russellian contents and, on the other, does not require sameness in the way propositions are cognized. The new condition for communication is identification and capacity to report the target propositions via suitable cognitive enrichments of propositional functions, that is, complex cognitive propositions that are the result of applying a function to other constituent propositions.[6]

Identification of propositional enrichments proves useful in the preservation of communication in various cases of limited cognitive access, such as the ones involving indexical and perceptual demonstrative expressions. The fundamental idea is that 'what assertion or communication of a proposition p requires is not necessarily that hearers be able to entertain p, but that they be able (i) to identify p as something the speaker wishes to assert, and (ii) to determine what is required for p to be true' (Soames, 2015, p. 101).

In the case at hand, this line of thought would emphasize that even if it is true that Dalton and John differ in the ways in which they cognize the target representational contents, they are (potentially we must presume) able to identify and report each other's modes of presentation. In briefest outline, in the case of John, we start from the predication that it is true of Dalton that he satisfies a certain propositional function *pf*, namely, the one that predicates believing a certain proposition *Ia* to an object o, namely, the proposition that predicates indivisibility of atoms. From *pf*, John can identify the pragmatically enriched function *pf** and predicate being true of Dalton that he satisfies *pf**. This function is simply the result of substituting Ia_d for *Ia* in *pf*, where Ia_d stands for the Daltonian way of predicating that atoms are indivisible (see Soames, 2013, 2015, Ch. 7 for variations of this line of reasoning). It follows that, although John cannot entertain Dalton's proposition, he certainly can, via an appropriate pragmatic enrichment, succeed in identifying and reporting what Dalton believed.

Soames's propositional functions can be taken to offer a neat response to the self-disagreement objection laid out in the previous subsection. The view can clearly rule out (DIS) as a correct characterization of disagreement by adding proposition identification as a requisite for genuine disagreement. However, all in all, it is unclear that this solution fares well in regards to (iv). The reason is that identification and report of a subject's attitudes via enriched propositional functions is not necessary, and certainly not sufficient, for the presence of genuine disagreement in the case of (1) and (2).

As advanced, Soames suggests two conditions for subjects to engage in communication: (i) they must identify a proposition as something it is wished to assert and (ii) determine what it would be for this proposition to be true (see quotation above). Although one can reasonably make sense of these conditions being fulfilled in the case of John (perhaps with the aid of relevant textbooks can he actually figure out Dalton's way of thinking or correctly identify it in Dalton's writings), it is extremely implausible that they are met in the case of Dalton. Alas, disagreement is, if anything, a symmetrical relation. Whatever needs to hold for A disagreeing with B about p must equally also hold for B disagreeing with A about p. But then, how could Dalton even fancy the existence of contemporary John, let alone correctly identify and determine the truth conditions of John's beliefs? The problem is not that we can barely conceive of Dalton (in a story belonging to our best sci-fi) as travelling in time and potentially meeting John to fulfill the requirements. The problem is that disagreement can presumably hold for A and B quite independently of any potential interaction. Identification of enriched propositions is, if perhaps sound in the case of face-to-face communication, clearly not necessary for disagreement.

Revealingly, identification via propositional functions is not sufficient for disagreement either. A remarkable fact of Soames's story is that it does not provide a clear sense in which Dalton and John hold inconsistent beliefs, apart from the fact that they believe contradictory semantic or Russellian contents. Without clearly defined *cognitive* inconsistent beliefs, however, disagreement seems out of view. To see this vividly, let us suppose that John is, like most of us, very sensitive to the vicissitudes and merits of Dalton's work back in the eighteenth century. It might be thus in the spirit of John's judgment to carefully and precisely identify and report the understanding-driven way in which the chemist held his beliefs without in the least trying to contradict or refute them. After all, in Dalton's time, charitable John might think, it was only to be expected that atoms were indivisible and this was indeed the widely accepted view in the relevant scientific community. John would accurately attribute to Dalton a different concept from his own concept of atom. This appraisal of Dalton's thinking makes cognitively inconsistent beliefs disappear. This is a case in which John succeeds in identifying Dalton's thought without genuine disagreement. Disagreement as expressed in condition (iv) seems therefore to go off track for the proponent of cognitive propositions.

3.3. Russellian Annotated Matrices

The previous considerations may seem to call for an examination of non-purely referential ways of accommodating (iv). If we shift towards a more, as it were, Fregean way of capturing the conflicting beliefs involved in (iv), we may succeed where Zalta and Soames clearly fail. To assess this suggestion, Mark Richard's approach in terms of RAMs is particularly befitting (Richard 1990, 1993, 1995).

Richard's recommended analysis highlights the role of belief mediators and the context-sensitive restrictions they impose on belief reports. On this view, provided that S is a belief report about A, the truth of S depends on the satisfaction of context-sensitive restrictions for S's representation or translation of A's belief mediators. While Richard takes these mediators to consist of sentence-like mental representations we can be quite liberal about their precise nature for present concerns, and allow readings in terms of other intensional categories, such as familiar Fregean senses.[7]

According to Richard, belief contents expressed in that-clauses are hybrid compounds of Russellian referents and belief mediators. The belief that atoms are indivisible, for instance, is analysed as containing (3) and (4):

(3) <'are indivisible', 'atoms'>
(4) <being indivisible, atoms>

(3) stands for the predicational combination of linguistic expressions and (4) for their Russellian interpretations. The combination of (3) and (4) yields a standard Russellian Annotated Matrix or RAM in (5):

(5) <<'are indivisible', being indivisible>, <'atoms', atoms>>

Richard's basic insight is therefore that our saying that a subject believes such and such amounts to saying that 'the RAM our t-clause determines represents one of the believer's RAMs' (Richard, 1990, p. 138). On this picture, correlation functions can be used to state precisely the kind of RAM-to-RAM translation that is admissible for every context. For now, we may assume that (1) and (2) satisfy whatever contextual restrictions on representation are operative. Let us abbreviate the RAM in (5) using the expression '<*Ia*>'. The full propounded regimentation following from this is found in (1^+) and (2^+):

(1^+) B (d, <*Ia*>)
(2^+) B (d, ¬<*Ia*>)

For (1^+) to be true, and assuming that contextual restrictions are met, the RAM associated with 'that atoms are indivisible' has to successfully represent or translate one of Dalton's RAMs whereas the truth of (2^+) requires that the RAM expressed with 'that atoms are not indivisible' represents one of John's RAMs. Now, RAMs are, one might think, the right sort of technical recourse to handle (i) to (iv). First, they can be seen as the structured contents of Dalton's and

John's doxastic states and therefore are ok for dealing with (i). Obviously too, (1^+) and (2^+) respect (ii) since they can be said to involve the same Russellian components as embedded in the target RAMs. The proposal seems also work for (iii) since it allows divergence in Dalton's and John's understandings via differing RAMs. More precisely, the view allows that Dalton's represented RAM involves the annotation <'$atoms_d$', atoms>, whereas John's involves the annotation <'$atoms_j$', atoms> and that <'$atoms_d$', atoms> ≠ <'$atoms_j$', atoms>. Finally, and crucially, are (1^+) and (2^+) also a match for (iv)?

The proponent of RAMs would argue in favor of a positive answer. Roughly, (iv) requires that Dalton and John disagreed or held contradictory beliefs with respect to atoms. But this is just what (1^+) and (2^+) provide, since they attribute to them contradictory RAMs, precisely the ones that, we are assuming, successfully translate the RAMs in Dalton's and John's representational system. In addition, Richard's account is not vulnerable to the complaint that disagreement is understood in purely referential or Russellian terms, as in the case of Zalta's, nor to the criticism that no inconsistent beliefs are in sight, as in the case of Soames's. RAMs, such as <*Ia*> and <¬*Ia*>, can express inconsistent beliefs and are constituted by a Russellian content *plus* intensional mediators of belief. RAMs seem therefore to offer just what (iv) can reasonably be taken to require, that is to say, a non-purely referential, doxastically articulated conception of disagreement.

Interestingly, several proposals echo Richard's strategy in possible-worlds raiment. A significant number of possible-world approaches would offer two kinds or levels of content, one setting up subject's expectations about the world (shaped in terms of epistemic scenarios or centered worlds) and another capturing the public sharable dimension involved in communication (by appeal to possible or uncentered worlds) (e.g., Stalnaker, 2008; Chalmers, 2011; Kölbel, 2013). Without space to develop this connection any further here, these two-levels of content can be seen roughly as corresponding to RAMs for levels (iii) and (iv), as spelled out in the present discussion.

Unfortunately, however, two shortcomings remain for the proponent of (1^+) and (2^+). On the one hand, it seems fair to pick up on the *representation* relation. The nontrivial question arises: what, on this account, guarantees that (1) and (2) are a good rendering of Dalton's and John's beliefs. For, admittedly, RAMs expressed in (1) and (2) are distinct from Dalton's and John's RAMs. Given two RAMs, <*p*> and <*q*>, there are two features that, on Richard's view, determine whether <*p*> represents or is a good translation of <*q*>:

> Always required for a good translation is preservation of Russellian content; conversants' focus and interests may impose extra restrictions on what can translate what. (Richard, 1995, p. 123)

The former Russellian condition (see also Richard, 1990, p. 138; 1993, p. 103) is crystal clear but it comes down to the Russellian interpretation of disagreement we have seen before. So it must be the bit about 'conversants' focus and interests'

that makes the important contextual contribution. Richard provides a number of examples and fairly detailed characterizations of contextual restrictions in terms of correlation functions or 'translation manuals'. The guiding idea seems to be that

> a context in which attitudes are ascribed is a context in which speaker and audience are engaged in constructing a 'translation manual' for reporting beliefs. Their construction of this manual will be guided in part by their beliefs and presuppositions about the identities of the believers under discussion. (Richard, 1995, p. 126)

But then, it is all but plausible that Dalton would have included among the relevant beliefs and presuppositions the idea that atoms are indivisible particles. After all, this was the experts' assumption back in Dalton's day. This would seem a solid basis on which to question that <'atoms', atoms> figuring in (1) and (2) would be a correct representation of <'atoms_d', atoms>, figuring in Dalton's representational system. It is clear therefore that we are in need of a story about what fixes contextual restrictions in precisely the desired way for (1) and (2).

At some point, Richard proposes for instance Lewisian accommodation in a conversational score as a criterion to charitably and conservatively determine context-restrictions for contextually sensitive terms such as 'believe'. Accommodation effects maximization of true contributions in the conversation (see Richard, 1995, for details). But even if one were to accept that Dalton and John are somehow engaged in a kind of (potential) conversation, accommodation will certainly not do the job in this case, since what (iv) requires is precisely a reading of (1) and (2) in which they do not both come out true.

We may, however, put the representation or translation relation to one side in the light of a connected but deeper problem. For (1^+) and (2^+) make us lose a clear sense in which (1) and (2) *genuinely* attribute to Dalton and John belief contents that characterize their epistemic perspective. Indeed, it is perfectly possible for us to successfully utter (1) and (2) to represent or translate Dalton's and John's beliefs, and still be quite in the dark about what the contents of those beliefs actually are. On this framework, cognitive or nonreferential content is hardly ever shared between ascriber and ascribee in belief reports: 'For all we usually know or care to find out, there just isn't an interesting match of nonreferential content between our sentences and the states of others when we successfully ascribe attitudes to them' (Richard, 1990, p. 104). Indeed, Richard's (1990, p. 150) approach explicitly allows that 'in general, interpersonal comparisons of a sentence's cognitive role or sense can't be made'. Russellian contents aside, the truth of (1^+) and (2^+) is compatible with absolute ignorance about Dalton and John's exact RAMs or cognitive states. In other words, Richard's proposal accommodates (iv) at the price of giving up (i).

There is no easy fix for this problem. One may try to figure out a way in which RAMs in (1) and (2) are also genuinely attributed. For instance, belief reports could be taken to express complexes made out of representing and

represented RAMs. Call these ‘composite RAMs’. Dalton’s and John’s target composite RAMs would be (5a) and (5b):

(5a) <<‘are indivisible$_d$’, ‘are indivisible’, being indivisible>, <‘atoms$_d$’, ‘atoms’, atoms>>

(5b) <<‘are indivisible$_j$’, ‘are indivisible’, being indivisible>, <‘atoms$_j$’, ‘atoms’, atoms>>

Let us designate (5a) and (5b) with ‘$<Ia>_d$’ and ‘$<Ia>_j$’, respectively. The proposal can be thus regimented via (1^{++}) and (2^{++}):

(1^{++}) B (d, $<Ia>_d$)
(2^{++}) B (d, $\neg<Ia>_j$)

This indeed provides us with genuine attributions but, since $<Ia>_d \neq <Ia>_j$, it blatantly fails to bring about inconsistent beliefs. (iv) is again out of view.

The typing flexibility of RAMs pointed out in Richard (1993) is no relief for this problem either. By using what Richard calls representational paths – i.e., collections of token representations – we may merge (5a) and (5b) so that we count them as involving one and the same representational type. However, the problem is reproduced at the level of representational paths, which will only make us comply with disagreement at the price of again failing to capture genuine attribution.

Another way of putting this point, based on criticism by Crimmins (1992), is in terms of an analysis of expressions like (6), in which Chris is aware of the differences in understanding ‘atom’ for Dalton and John.

(6) Chris believes that (Dalton believes that atoms are indivisible and that John believes that atoms are not indivisible).

Roughly, according to Richard, Chris’s overall representational structure exhibited in (6) – what he calls ‘belief text’ – can be taken to include representational paths that group together, on the one hand, Chris’s and Dalton’s representations, on the other hand, Chris’s and John’s representations. But although this provides a solution to the correct assignment of truth to (6) – which is allowed to be ambiguous between readings in terms of each representational path – note that the solution requires that not all representational tokens in (6) belong to the same representational path, as disagreement requires (cf. Richard, 1993, §4). To concede (contrary to what the analysis was meant to provide in the first place) that all representational tokens in (6) do belong to the same representational path, however, would leave us still in the dark as to how Chris actually manages to keep track of Dalton’s and John’s distinct representations or, in other words, as to how the analysis makes room for (i).

In sum, even if we ignore the troubles that the representation relation brings about, the very structure of RAMs-analysis of (iv) has as an inevitable consequence the impossibility of respecting (i). Richard’s hybrid account ultimately

fails to provide an analysis of (1) and (2) that lives up to the intuitively correct (i)–(iv).

4. Understanding and disagreement

The argument so far runs to the following conclusion: Once one buys in for IU and individuates thoughts at the level of (iii), there is no road back to genuine disagreement and fulfillment of condition (iv). This verdict is supported by the analysis of various precise ways of articulating positions that preserve IU, ranging from contradictory Rusellian propositions, thought identification and contradiction at some third intensionally specified level. Although the discussion offered has confined attention to specific developments, it seems fair to conclude that the prospects for coming up with a satisfactory notion of disagreement compatibly with IU are dim.

This result, however, puts us in a better position to appreciate the merits of a different strategy. Unprejudiced reflection on the Dalton/John case brings out the significance of analyses of belief ascription that line up, first and foremost, with the requirements of rationality in public, interpersonal and intertemporal situations whose generality and ubiquity is pervading.

Without the space for spelling out the alternative strategy in great detail here, I wish to make explicit some key elements which would seem steps in the direction of a plausible account for which no puzzle arises in relation to (i)–(iv). The recommended account, it must fairly be noted, is inclusive of a variety of approaches and traditions. For instance, anti-individualistic views (Burge, 1979) can be seen as advancing this kind of alternative by allowing concept possession in cases of partial (mis)understanding. In general, the alternative has as a natural partner any theory in which the social and spatio-temporally extended community is constitutive of one's concepts. The spirit as well as the letter of this kind of theories traces back at least to the later Wittgenstein.

What we need, therefore, is (not a theory that individuates concepts in accordance with reference and not a theory that individuates concepts in terms of differing understandings but) a theory that individuates concepts in terms of publically shared intensions or grounds for disagreement as laid out in (iv). Can we account for (iii) from this point of departure? The recommended answer is: Yes, insofar as we acknowledge a notion of a way of thinking that does not turn on the individuation of one's concepts.

Returning to our example, Dalton (but not John) gets something wrong in his thinking about atoms even if he might remain perfectly ignorant of this. The key point is thus that this kind of error, although affecting the way in which Dalton thinks about atoms, does not affect the identity of Dalton's *atom*-concept. Let us introduce the understanding-operator U to capture this. On the reading I am proposing, U is interpreted as a function that takes propositional contents and propositional constituents as arguments and delivers a

certain understanding – a function, that is to say, from concepts or propositions to understandings. For concreteness's sake, we may take understanding to be manifested in a particular application or pattern of application associated with the propositional content or conceptual constituent. Thus 'U_x (p)' denotes the understanding that a subject x has of a proposition p (and analogous notation for the understanding of p's conceptual constituents).

Equipped with this notion of understanding we may tackle Dalton's and John's beliefs as follows, where '$\underline{Ia}$' stands for a structured Fregean thought or some such intensionally specified content:

(1*) B (d, $\underline{Ia}$) & U_d ($\underline{Ia}$)
(2*) B (j, ¬$\underline{Ia}$) & U_j (¬$\underline{Ia}$)

According to (1*) and (2*), Dalton and John believe contradictory propositions at the level of Fregean thought and thus the analysis is especially fine as an accommodation of (iv). Beliefs and belief-constituents attributed to Dalton and John by means of (1) and (2) are taken to be individuated in a way that secures (iv). For familiar reasons, the analysis can be taken to respect both (i) (genuine belief attribution) and (ii) (reference sharing). What about (iii)?

To fill in the details of this story is certainly not a very easy task but these general remarks seem to lead us in the correct direction. Different U-functions from thought or thought-constituents are associated with Dalton's and John's beliefs. Crucially, on this analysis, it is something about the U-functions that captures the difference in ways of thinking featuring in (iii). More precisely, in the case at hand, the claim is that for instance, Dalton's and John's associated U-function for *atom* differ: $U_d(\underline{a}) \neq U_j(\underline{a})$. This is shown, *inter alia*, in Dalton's willingness to apply the concept to indivisible things which contrasts with John's willingness to apply the concept to divisible things. The result seems to be the sketch of a full accommodation of (i)–(iv) in this case.

An objector may worry about the real significance or even ad hoc character of the proposal just introduced. Is it not possible – someone could question – for the above discussed analyses to incorporate a U operator of the same sort that figures in (1*) and (2*)? Would not the resulting picture be also one that lives up to (i)–(iv)? To this I reply that although extant theories could possibly accommodate a U operator of the envisaged sort, one should not underestimate the depth of the change that this theoretical move demands. First, the theoretical move requires rejection of IU. Note that the U operator appears as an element outside and independent of the belief relation. This is not an accidental feature of the analysis. It brings out the new perspective according to which differences in understanding do not, or do not necessarily yield differences in belief and thought. Second, the theoretical move is out of range for all the theories that allegedly capture understanding differences *already* in terms of modes of presentation (on Fregean or neo-Russelian construals), *de dicto* beliefs (in Zalta's theory), cognitive contents (according to Soames) or belief mediators (in

Richard's framework). In sum, even if the U function is a quite simple element in our preliminary analysis, this function, or something playing its role, amounts to a deep change in our theory of belief ascription largely neglected and hard to accommodate by the mainstream accounts here considered.

The analysis offered is not only hard to accommodate by extant theories. In addition, it has distinctive consequences worth exploring and emphasizing. On the recommended view, for instance, attribution of belief goes hand in hand with the attribution of a certain understanding. This can be used to back the claim that sentences of the form 'S believes that p' are true if and only if S is belief-related to p and does so under a certain understanding. A straightforward, intuitively plausible consequence of this reading is that subjects do not believe propositions they do not understand or misunderstand in some way or other. Thus, although not a guide to individuation, understanding or misunderstanding can yet be seen as a requisite for genuine attribution. Unlike other analyses, the proposal would explicitly exclude the possibility of cases in which S is truly attributed the belief that p and S does not understand p *at all*.

Needless to say, the proposal just introduced is sketchy and neutral regarding a number of specific articulations. By way of conclusion, however, I would like to stress that it does not involve commitment to a particular conception of understanding, let alone to a second level or layer of sense. First, a second layer of sense may still be compatible with the individuation of belief via understanding. Again, understanding as conceived in the analysis – viz. in terms of the U operator – does not figure as an element of the belief relation (just as it would for instance in so-called hidden indexical theories) but as a strictly independent element. Second, the U operator can be given a low-profile reading – viz. in terms of application patterns – so that it does not necessarily involve an epistemic or cognitive relation towards thoughts and concepts themselves. For these reasons, analyses along the lines of (1*) and (2*) do not commit one to analyses in which understanding should be conceived in a particular way, let alone in terms of a second layer of senses.

5. Conclusion

Much more needs to be said for a full development of these preliminary remarks. There are many substantial issues that remain unsettled and that await further investigation. In particular, and whenever (i)–(iv) are to be respected, the individuation of beliefs and concepts beyond understanding suggests a deep revision of standard conceptions of rationality and the theoretical aims underlying correct analysis of belief ascription. This revision would be the result of taking seriously the idea that the kind of rationality that needs to be genuinely preserved in those cases is, first and foremost, of a public sort, and very much not of the understanding-relative sort that leads us to the blind alley to which alternative accounts seem to lead us in relation to (1) and (2).

Notes

1 The most sophisticated versions of Zalta's OT include further relativizations so that, for instance, 'senses of names may vary from time to time' (Zalta, 1988, p. 196).

2 Technically this means that we should ignore the truth value of *de dicto* propositions (Zalta, 1989, p. 463) in assessing whether *x* truly/falsely believes.

3 For ease of exposition, here and elsewhere in the paper, I am taking the general term concept *atom* as the singular term concept of a particular object. Nothing hinges on this particular interpretation of the case.

4 The view that reference is the fundamental dimension for the assessment of communication and disagreement phenomena stems at least from Frege's famous passages in 'On Sense and Reference' (1892) where he claims that sense variation may be tolerated in ordinary language '[s]o long as the reference remains the same' (Frege, 1892, p. 58).

5 The relevant notion of disagreement at stake in this particular context is synchronic disagreement or disagreement at a given time. It seems rationally unobjectionable to disagree with oneself regarding beliefs previously held, for instance, in the light of previously ignored information or testimony.

6 For discussion about functional cognitive propositions and how they are used to accommodate various kinds of predication see Soames, 2015, Ch. 2.

7 In spite of his advertised Russellian leanings, Richard himself acknowledges at several points the affinity of his approach with Frege's developments. For an explicitly Fregean articulation along similar lines see Chalmers, 2011.

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