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Review of *What's Within: Nativism Reconsidered*, by Fiona Cowie

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This book is a welcome contribution to the literature on nativism. It's a highly readable work that contains a wealth of empirical data and philosophical argumentation.

Cowie covers a lot of ground, but the book is nicely organized around three main issues: the question of what nativism is; the status of innate concepts; and the status of nativism about language. We will say a little about each of these, but our focus will be on her discussion of language, which is the longest and by far the most interesting part of the book.

In the first part of the book, Cowie identifies two strands in historical nativist thought and goes on to claim that these are recapitulated in the writings of Jerry Fodor and Noam Chomsky. On the first strand (which she identifies with Fodor), nativism is invested with a kind of mysterianism; that is, nativists claim that the origins of mental phenomena are irredeemably mysterious. On the second strand (which she identifies with Chomsky), nativism involves a commitment to a particular sort of cognitive architecture, that is, to rich innate domain-specific knowledge or capacities. In the contemporary literature, the domain-specific interpretation is a standard, if not *the* standard, interpretation of nativism. The idea is that empiricists and nativists both agree that human cognitive capacities build on a certain amount of innate structure; what they disagree about is how rich this structure is. This view of nativism depends upon a prior understanding of what it means for something to be innate. Cowie highlights the difficulty of this important yet neglected philosophical question, but she does not offer any new positive account.

Her discussion of innate concepts – the second part of the book – focuses on Jerry Fodor's notorious argument that most lexical concepts are innate. Cowie's commentary on Fodor is valuable and, we believe, largely correct. Fodor argues that concepts must have internal structure in order to be learned and that since virtually all lexical concepts lack internal structure, they must be innate. Cowie's main response is that the acquisition of a concept should be understood in terms of what it is to possess a concept and thus by way of a theory of content for mental representations. Once one characterizes the success conditions for acquisition by reference to a theory of content, this paves the way for the development of a psychologically-based account of concept acquisition. This kind of response has been suggested by several philosophers, and it's one we ourselves have developed elsewhere (see, e.g., Sterelny 1989, Margolis 1998, and Laurence & Margolis, ms.). Though Cowie could provide more detail about the general form of the acquisition process, there is much to agree with in what she says. On the other hand, it's worth mentioning that we see no grounds for the charge that Fodor's nativist account is mysterian. In fact, radical concept nativism

seems to fit quite naturally with the domain-specificity model of nativism that's taken for granted in other areas. According to radical concept nativism, the mechanisms of concept acquisition are maximally domain-specific, that is, separate mechanisms are in play for each lexical concept.

The richest part of the book is the third one, where Cowie takes a critical look at the evidence for Chomskyan nativism about language. This material is also the most difficult to assess. Part of the problem is that what Cowie gives with one hand she often takes back with the other. The bottom line of this section seems to be something like this:

Though Chomskyans have made a powerful case against simple empiricist accounts of language acquisition, they have not made a conclusive case for their particular brand of nativism. There are several categories of alternatives to both Chomskyan nativism and simple empiricism. So we should be open-minded about the non-Chomskyan alternatives to simple empiricism.

At the same time, Cowie presents data aimed at calling into question many of the central arguments for Chomskyan nativism, claiming that these arguments provide *no reason at all* to accept Chomskyan nativism. Thus it's easy to read *What's Within* as a contemporary empiricist manifesto. But such a reading would be mistaken. While Cowie points to some areas where nativists may have overlooked relevant alternatives or may have provided less powerful empirical support for their claims than their rhetoric might suggest, the overall position that she advocates is actually strongly nativist. In the end, she concludes that two of the three major categories of alternatives to Chomskyan Nativism are ruled out by considerations that Chomskyans cite in favor of their account, and she endorses a position that has a strikingly Chomskyan flavor.

Still, if the position Cowie ends up advocating isn't all that different from that of her philosophical opponents, the route she takes to it certainly seems to be. Much of the interest of her discussion is in the way she picks through the details of Chomskyan arguments. Particularly important in this regard is Cowie's claim that the most famous argument for Chomskyan nativism, the so-called poverty of the stimulus argument, 'fails abysmally on both empirical and conceptual grounds to support nativism about language learning' and thus this argument does not offer 'the least reason to think that there is a special faculty for language acquisition' (pp. 310–11).

Cowie characterizes the Chomskyan view in terms of several component theses. For our purposes, we need only three of the theses. The position that she calls *Chomskyan Nativism* incorporates all three (p. 176):

(DS) Domain Specificity

Learning a language requires that the learner's thoughts about language be constrained by principles specific to the linguistic domain.

(I) Innateness

The constraints on learners' thoughts during language learning are innately encoded.

(U) Universal Grammar

The constraints and principles specified in (DS) as being required for language learning are to be identified with the principles characterized in the Universal Grammar.

Cowie then identifies three families of theories occupying the logical space between the simple empiricism of behaviorists and Chomskyan Nativism. First, there is *Putnamian Empiricism*. This position accepts Innateness (I) but rejects both Domain Specificity (DS) and Universal Grammar (U). Second, there is *Enlightened Empiricism*, which accepts Domain Specificity (DS) but rejects both Innateness (I) and Universal Grammar (U). And finally, there is *Weak Nativism*, which accepts both Domain Specificity (DS) and Innateness (I) but rejects Universal Grammar (U).

Cowie considers three principle arguments for Chomskyan Nativism in light of the alternatives she identifies. The first two are versions of Chomsky's famous poverty of the stimulus argument, and the third is based on dissociations between linguistic ability (and its acquisition) and other cognitive abilities. In each case, she argues that the argument falls short of establishing Chomskyan Nativism, since each argument is compatible with one or more of the weaker alternatives.

The first argument she calls *The A Posteriori Argument from the Poverty of the Stimulus* (APS). As Cowie reconstructs it, the argument is developed along the following lines:

To learn a language requires learning its rules, e.g., in English one must learn the rule – call it (H1) – that to form a yes-no question from a declarative, the main auxiliary verb is moved to the front of the sentence.¹ There are, however, other potential rules that are broadly compatible with the data to which language learners are exposed. For instance, children might suppose instead that the yes-no question rule is (H2): 'move the first auxiliary verb to the front of the sentence'. As it happens, children settle on the correct rule, (H1), *despite lacking sufficient data* that favors it over alternatives. So children must have an innate endowment that guides them in this task, one that is richer than the endowment associated with a simple empiricist mechanism.

Cowie's main criticisms of this argument are, first, that nativists have done very little to substantiate their claim that the data is so impoverished and, second, that the argument doesn't rule out the more sophisticated empiricist positions she distinguishes (Putnamian and Enlightened empiricism). In particular, she sees no reason why a Putnamian empiricist learner might not naturally seek 'deeper' regularities and thereby settle on the correct rules, or why an Enlightened empiricist learner might not learn from experience to put forward structure-sensitive rules (like H1) rather than structure-insensitive rules (like H2). She concludes that this argument fails 'to establish anything solid as to the relative merits of nativism and empiricism about language learning' (p. 203).

The second argument is another version of Chomsky's poverty of the stimulus argument, which she calls *The Logical Problem of Language Acquisition*. This argument focuses on the fact that, on the one hand, there is a huge number of potential rules of language many of which are pre-theoretically simpler and more natural than the actual rules, while, on the other hand, there is very

¹ Thus the yes-no question corresponding to the declarative sentence (1) is (2). (1) Ecuador is in South America. (2) Is Ecuador in South America?

little information available about which strings of words are *not* in the language to be learned.² As a result, it seems that a child who puts forward incorrect rules is unlikely to encounter the evidence she would need in order to recover from her mistaken hypotheses. As Cowie says, ‘The empiricist’s requirement that the learner prefer simpler, more general, more elegant (etc.) hypotheses provides little in the way of guidance: too little, surely, to prevent a learner’s falling irretrievably into the myriad possible pitfalls revealed by the Logical Problem. Language is so strange, its workings so abstruse, that a learner utterly uninformed as to its character surely must go wrong. The Logical Problem thus illuminates, in a particularly vivid and intuitively compelling way, the need for a task-specific helping hand in the linguistic domain’ (p. 209).

Cowie’s main criticism of this argument is that if it were sound, it would establish too much, since the same sort of problem arises ‘for all learning involving projection beyond our experience’ (p. 215). For instance, exactly parallel reasoning would establish that we have innate domain-specific capacities for acquiring such things as the concept of a curry. This suggests to Cowie that there must be more negative evidence around than nativists recognize, an idea she explores in considerable detail. Nonetheless, she does take this argument to establish (DS), for there are too many ways a child might plausibly go wrong in acquiring language without some sort of ‘task-specific helping hand’. What she won’t grant is that this helping hand is innate. That is, she maintains that the argument does not establish (I). Nor does she take it to establish (U). Nothing in the argument proves that the domain-specific constraints on language learning could not have been previously acquired by domain-neutral learning mechanisms.

Finally, Cowie considers how various cognitive and linguistic dissociations bear on the nativism dispute. The relevant data draws from the study of Specific Language Impairment, critical period effects, creolization, and other related phenomena. Cowie notes that this data is controversial, but she tentatively endorses Weak Nativism on the basis of these sorts of considerations.

There is much here that deserves comment, but we will restrict ourselves to a brief discussion of Cowie’s case against the poverty of the stimulus argument as embodied in her APS and the Argument from the Logical Problem.

The first point to note is that the essential feature of Cowie’s second version of the argument (the Argument from the Logical Problem) is that there is a huge number of potential rules that the child might plausibly hypothesize, many of which are simpler and more natural from a pre-theoretic point of view than the rules that actually seem to govern a given natural language. It is essentially on these grounds that Cowie accepts (DS). But though she does not draw attention to it, these same considerations are working in the background of her first argument (APS) as well – and indeed, in the background of *any* poverty of the stimulus argument. It is not as though APS concerns only one rule and one alternative to it (e.g., H1 and H2, above). Clearly there are a great many plausible

² Note that a sentence’s not occurring does not mean that it is not a sentence in the language to be learned, since the vast majority of possible sentences are never uttered by anyone, much less by the people around you when you are learning the language.

alternatives to any given rule, and many rules working together in language,³ and the correct rules aren't usually the most natural ones. So by Cowie's own lights, (DS) has broad support on poverty of the stimulus grounds, and there is no substantial difference between her two versions of the poverty of the stimulus argument in this regard.

Crucially, though, Cowie claims that any domain-specific helping hand needn't be innate. How, then, is it to be learned? This is a very serious problem, about which Cowie has very little to say. After all, Chomskyan nativists argue that the helping hand is knowledge of UG. And it is even harder to see how a child with no *innate* domain-specific guidance could glean knowledge of UG (as opposed to the particular language of her community) on the basis of the fragmentary data from her limited exposure to just a single natural language. Cowie considers this response, which she calls the *Iterated Argument from the Poverty of the Stimulus*. Her reply is to challenge the nativist's contention that the helping hand necessarily consists of knowledge of UG. But this really misses the point of the argument.

While the argument as we have just presented it takes the domain-specific help to be knowledge of UG, it's difficult to see how any remotely plausible alternative would not generate the same sort of 'iterated' argument. Whatever domain-specific information or constraints are acquired, the information or constraints would have to be sufficient to guide the learner through a vast and intricate space of potential rules, some of which are far more natural than the rules the language learner ultimately settles on.⁴ In other words, the helping hand itself is bound to be rich and intricate and carefully orchestrated in how it supports language acquisition. The upshot is that the learning of any adequate helping hand is, for all anyone knows, just as demanding as the learning of UG. So the iterated argument applies here as well; the very considerations that argue for (DS) argue for (I).⁵ This shouldn't be at all surprising. After all, if (as Cowie grants) domain-general strategies are unable to help a learner navigate through the huge space of potential hypotheses concerning her language, it's hard to see how they can readily give her the helping hand she needs to get through them either.

In short, pace Cowie, a strong case for nativism about language *can* be made on standard poverty of the stimulus grounds. That case is only bolstered by the dissociation arguments and by what

³ To get a feel for the range of potential hypotheses, consider that according to Steven Pinker there are 24 billion billion possible orderings of English auxiliary verbs, many offering tempting alternatives to the actual rules (see Pinker 1994, p. 272).

⁴ It's important to keep in mind just how difficult learning a language is. One way to put the point in focus is to recall that a substantial community of professional scientists have been trying to specify the rules of natural languages such as English for at least the past 40 years or so and that they have generated an impressive number of hypotheses, not one of which has yet proven entirely adequate to the available data.

⁵ What, then, should we say about Cowie's curries? The main thing to note is that not all cases of learning that involve projection beyond a finite set of experiences involve exactly the same challenges. The kinds of positive and negative data varies, as well as the pattern of projection, the ease of the learning task, and the cognitive resources that may plausibly be taken to be recruited in learning. As a result, much more would need to be said in order to support her claim that the arguments are 'precisely parallel'.

Cowie herself call ‘a research program in its vigorous prime’, viz., the UG-based approach to language acquisition (p. 263).

Of course, it’s an empirical question whether the UG program is the correct way to go, and there may be other approaches to consider. But the mere possibility of empiricist alternatives does nothing whatsoever to diminish the strong case that’s already been made for Chomskyan Nativism. As Chomsky himself once said to Hilary Putnam, who likewise pressed the possibility of empiricist alternatives:

. . . Putnam offers not even the vaguest and most imprecise hints as to the nature of the ‘general intelligence’ or ‘multipurpose learning strategies’ that he believes to exist. Therefore, his claim that some particular property of [the genetically determined initial state of the language learner] can be explained in terms of these notions cannot be assessed. It has the form of an empirical hypothesis, but not the content of one.

. . . I agree that ‘for all we know’ some notion of ‘general intelligence’ about which we have ‘no idea’ might explain everything I have ascribed to [the genetically determined initial state of the language learner]. Similarly, there would be little point in debating the claim that ‘for all we know’ some mysterious force, as to the character of which we have ‘no idea,’ might explain everything that physicists try to explain in terms of their complex constructions. (Chomsky 1980, pp. 311, 323)

No one thinks that Chomskyan Nativism has been decisively established, not even Chomsky. The issues at hand, being largely empirical, don’t admit of proof. Yet this is hardly a concession. Again, the mere possibility of alternatives to the UG-based approach to language acquisition does nothing at all to hurt the nativist position.

We conclude that Cowie’s case against the poverty of stimulus argument fails. Nevertheless, the book is a substantial contribution to the nativism debate and will give nativists and empiricists alike a good deal to think about.⁶

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