What are modules and what is their role in development?  
s.butterfill@warwick.ac.uk

§1
Fodor’s three claims about modules:
1. they are ‘the psychological systems whose operations present the world to thought’;
2. they ‘constitute a natural kind’; and
3. there is ‘a cluster of properties that they have in common’ (Fodor 1983: 101).

These properties include:
• domain specificity (modules deal with ‘eccentric’ bodies of knowledge)
• limited accessibility (knowledge in modules is not usually inferentially integrated with general knowledge).
• information encapsulation (modules are unaffected by general knowledge or knowledge in other modules, i.e. ‘top down’ processing is limited)
• innateness (the information and operations of a module are genetically specified).

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§2
The ‘Computational Theory of the Mind’:
‘Thinking is computation’ (1998: 9).

Fodor’s (?) argument against this theory:
1. Computational processes are not sensitive to context-dependent relations among representations.
2. Thinking sometimes involves being sensitive to context-dependent relations among representations as such (e.g. the relation … is adequate evidence for me to accept that …).
3. Therefore, not all thinking is computation.

§3
How do modules facilitate development?
Do they provide ‘a basic infrastructure for knowledge and its acquisition’ (Wellman and Gelman 1998: 524)?

‘The module … automatically provides a conceptual identification of its input for central thought … in exactly the right format for inferential processes’ (Leslie 1988: 193–4, my italics).

‘The building blocks of all our complex representations are the representations
that are constructed from individual core knowledge systems.’ (Spelke 2003: 307)

‘core systems are conceptual and provide a foundation for the growth of knowledge’ (Carey and Spelke 1996: 520)

‘Once they have learnt these terms ['left' and 'blue'], the combinatorial machinery of natural language allows children to formulate and understand expressions such as left of the blue wall with no further learning’ (Spelke 2003: 296).

Two notions of what this concept is:

The concept OBJECT is ...

(a) that in virtue of having which we are able to think about objects as such;

(b) that in virtue of having which we are able to compute information about objects as such.

§4

Four months: infants enjoy categorical perception of phonemes (Eimas, Siqueland, et al. 1971), which arguably involves a speech module (Liberman and Mattingly 1985).

Three/four years: children first able to think and reason about phonemes as measured by standard tests for phonological awareness.

Standard tests of phonological awareness:

- sorting according to initial phoneme
- phoneme segmentation, blending
- word completion
- ...

Success on these tests is best explained by a single factor and: (i) depends on language spoken, (ii) depends on literacy and writing system, (iii) varies from phoneme to phoneme.

‘it does not follow from the fact that a child can easily distinguish bud from bat that he can therefore respond analytically to the phonemic structure that underlies the distinction’ (I. Y. Liberman, Shankweiler, et al. 1974: 203).

References


--- (2000), The mind doesn’t work that way: the scope and limits of computational psychology. MIT Press.


