Book Reviews

Aylwin, S. *Structure in Thought and Feeling.* London and New York: Methuen, 1985, 274 pages.

Reviewed by *Jennifer Church, Philosophy Dept., Vassar College*

Thoughts and feelings are usually regarded as distinctly different states of mind. Although thoughts may influence feelings, and feelings may influence thoughts, thoughts are constituted by their representational character while feelings are constituted by their qualitative character. Susan Aylwin, in her recent book, *Structure in Thought and Feeling,* challenges this separation of thought and feeling—not by criticizing it directly, but rather by describing three "structures" of the mind that are equally structures of thought and structures of feeling: a verbal structure, a visual structure, and an enactive structure. Her description of these three structures are supported by a wide variety of findings from personality theory, psychoanalysis, semantics, and, most importantly, her students' "Journal of Idle Thoughts" and her "Mode of Thought Questionnaires." I am uneasy about the way she distinguishes verbal, visual and enactive structures, and I worry that a kind of circularity infects her use of the journals and questionnaires; yet, I admire the synthetic cast of mind evident on almost every page of this book, and I am convinced that the connections she explores are relevant to a variety of projects in cognitive science.

The distinction between verbal representations and visual representations is a familiar, albeit a controversial one. Aylwin is not interested in the broad questions this distinction raises for a theory of representation: Must all representations have a truth value, and can an image have a truth value? How would "translation" between two different forms of representation work, and does it presuppose a more basic third form of representation? Must visual representations be non-digitally encoded, and is the brain capable of non-digital coding? It is enough, for her purposes, that subjects respond differently when asked to solve a problem verbally than when asked to solve it visually, or when asked to make verbal rather than visual associations. Correlated with these differences, she maintains, are systematic differences in feeling. Before detailing these correlations, however, she introduces a third and less familiar "mode of representation" that she calls "enactive representation." One enactively represents a particular scenario—a scenario involving confrontation between two animals, for example—when one imagines oneself as a participant in that scenario. That is to say, enactive representation requires that one imagine oneself present in the relevant scenario (as opposed to describing or observing it "from the outside") and it requires that one's imagined position be an active one (as opposed to that of a passive bystander). This incorporates a *bodily* aspect to enactive repre-

sentation that is lacking in both verbal representation and visual representation.

The core of Aylwin's research consists of recording subjects' responses to short phrases such as "parrot is in the same forest as gorilla" or "crocodile snaps at flamingo." Subjects were asked to represent the stimulus by either saying it to themselves, seeing a picture of it in their mind's eye, or imagining they *were* it; they were then asked to "free associate" from these representations. When asked to represent the stimulus phrase by saying it to themselves, subjects free associations tended to fasten on hierarchical, genus/species sorts of relations (e.g., from parrot to bird to animal), or on rhyming and cliché-like sorts of relations (e.g., from parrot to carrot to "carrot and stick"). Asked to represent the stimulus phrase by picturing it in their mind's eye, subjects' free associations concerned spatial arrangements (e.g., the parrot on the gorilla's head), or parts and attributes of the pictured items (e.g., blue feathers, thick beak). Free association following the request to imagine they *were* what was mentioned, on the other hand, led subjects to remark on motives and consequences (e.g., parrot is pestering gorilla, it hopes to humiliate it).

The correlations indicated above were fleshed out in three further studies. In one study, students were instructed to either say, or see, or be a word pair such as "weasel-easel," "kettle-spout," or "greedy-stomach ache," then asked to rate how good each association was. Ratings were higher for items paired hierarchically or by rhythmic affinity when the instruction was to say the pair, higher for items paired situationally or attributively when the instruction was to see the pair, and higher for items paired as cause and effect when the instruction was to be the pair. This study reinforced the findings of the free association study (aligning verbal representation with hierarchical and rhythmic associations, visual representation with situational and attributional associations, and enactive representation with causal and motivational associations). In a second study, the relevant correlations were extended to include feelings. A number of students were asked to keep daily records of their "idle thoughts" and the feelings that accompanied them. The results indicated a correlation between idle thoughts and feelings of mastery or alienation, between visual idle thoughts and feelings of social self-consciousness or attunement, and between enactive idle thoughts and especially strong or morbid feelings. Aylwin explains these correlations by suggesting that focussing on hierarchies fosters feelings of mastery or alienation, that a concern with environment creates sensitivity to context and to social exchanges, and that a preoccupation with consequences heightens emotional intensity and pessimism. Finally, a third study extended these correlations and speculations still further by identifying personality types associated with each sort of representation. Students were asked to describe themselves, and these descriptions (lists of adjectives) were compared to the sorts

of representations they most favored in their idle thoughts. Verbal repre-
senters, Aylwin reports, were self-critical power-seekers; visual representers
were sensitive comfort-givers and seekers; enactive representers were self-
driven, emotionally intense risk-takers. These correlations with personality
types were further supported by evidence that verbal representers are more
likely to pursue careers in business and finance, that visual representers are
more likely to pursue careers in the arts or social work, and that enactive
representers are more likely to pursue careers in engineering. (Off-shoots of
these studies, only touched upon in this book, include findings regarding
male-female differences, attitudes towards nature, suicidal tendencies, and
more.)

I find many of the thought-feeling correlations highlighted by Aylwin
plausible and provocative but, in the end, less indicative of distinct verbal,
visual and enactive structures of representation and feeling than of relational
structures equally present in language, vision, and action. I accept the corre-
lation between hierarchical thinking and feelings of mastery and alienation,
for example, but I question the claim that this pair is distinctive of a peculiarly
verbal representational structure. Isn't there an analog to the verbal move
from species to genus in the visual move from immediate environment to
larger environment, or the "enactive" move from immediate to longer-term
consequences (the first being subsumed by the latter in each case)? Likewise,
isn't there at least as much concern with power (the source of feelings of
mastery and alienation) in visual images of parrots perching on gorillas or in
enactments of crocodiles snapping at flamingos as in verbal descriptions of
parrots as birds or crocodiles as reptiles? Often, where Aylwin sees different
representational structures (verbal, visual, enactive) in play, I see only dif-
ferences in subject matter. It is not surprising, for example, that the word
pair "weasel-easel" would be rated as a better association when the instruc-
tion is to *say* rather than *see* this pair. This, however, seems to indicate
nothing more than the fact that rhyming relates sounds and not sights (a
visual analog might be "red-orange" or "mirror-reflection" and an enac-
tive analog might be "push-strain" or "run-pant"). There is a worrisome
circularity lurking just below the surface here. Aylwin's instructions to rep-
resent a stimulus phrase or word-pair verbally encourages subjects to treat
the words themselves, rather than the things referred to by the words, as the
starting point for her associations; and this ensures a (totally uninteresting)
correlation between verbal "representations" and rhythmic associations.

There are several other important instances of circularity in Aylwin's
studies. Asking subjects to imaginatively *enact* and *participate* in a given
scenario encourages greater identification and physical involvement which,
in turn, encourages stronger emotional responses. A correlation between
enactive imaginings and strong emotions is thereby guaranteed; but such a
correlation may not indicate an especially emotional structure of represen-

tation so much as an especially emotional way of responding to representations. In her study of idle thoughts, subjects are told beforehand about the three structures of representations and their visual counterparts in feeling (counterparts on the basis of the earlier free association studies). This alone could be expected to bias the reports in favor of the predicted correlations. The results, however, remain highly ambiguous and it is often hard to accept Aylwin's categorizations without first accepting her conclusions. Reports involving strong emotions, for example, count as reports of enactive representations despite the fact that they are rich in verbal exchanges and environmental detail (cf. p. 138) and reports involving social self-consciousness count as reports of visual representations despite the fact that they are rich in imagined participation and verbal cliches (cf. p. 117).

I do not think circularity is always a bad thing; the bootstrap method of theorizing is unavoidable—especially, perhaps, within cognitive science. What worries me about Aylwin's book is the shakiness of her initial distinctions between verbal, visual and enactive representation. More justification and articulation of these foundations is necessary in order to secure the tripartite model she proceeds to build; and this, I suspect, will require considerably more work on the broader questions facing any theory of mental representation.

McGuinness, Diane. *When Children Don't Learn: Understanding the Biology and Psychology of Learning Disabilities.* New York: Basic Books, 1985, 310 pages.

Reviewed by *Stephanie Thornton, University of Sussex.*

The main theme of this book is that various types of school difficulty are presently being misrepresented, in ways which obscure their remediation. McGuinness examines dyslexia, math problems, and hyperactivity; concluding in each case that diagnosing children in these terms attracts all the well-known difficulties associated with such stigmatized labelling, whilst offering no theoretical advantages, since these concepts are virtually devoid of meaning.

Dyslexia, hyperactivity, and math phobia are not coherent categories. Rather, they are superordinate categories, containing widely disparate elements, and as such, these concepts are devoid of explanatory power. There is no evidence to support the view that physiological problems underly any of the phenomena indicated by these terms: so far from being organically based syndromes as is commonly supposed, learning disorders as currently