Matthew Nudds & Casey O'Callaghan

Sounds & Perception: New Philosophical Essays

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The cover of this pioneering volume of essays on auditory perception is a striking photograph of Sam Van Aken's *Thumper*—a head-high, spherical geodesic lattice, studded with dozens of sub-woofer speakers. Connected to five, thousand-watt amplifiers, the metal sphere emanates a droning bass sound, which loops from angry physical insistence into silence and back again. *Thumper* is the cover of a manifesto. Too long have philosophers been obsessed with sight. Too long have they neglected the distinctive puzzles raised by non-visual modalities, and developed distorted vision-based models of the other senses. *Thumper's* message is: listen up. Anyone interested in perceptual experience (or for that matter epistemology, metaphysics, or aesthetics) will have much to learn if they do.

Nudds and O'Callaghan introduce the ten diverse papers they have collected with a comprehensive and valuable introduction in which they helpfully map out the conceptual geography. Firstly, they distinguish two broad issues: one 'constellation of debates' concerning the *ontology* of sounds, another concerning the *contents* of auditory experience. Evidently, the two debates are connected. If we know anything about sounds, it is that they are amongst the objects of auditory experience.

Nudds and O'Callaghan (p.12) go on to offer a tripartite division of accounts of the contents of auditory experience. Austere accounts insist that we only ever hear sounds and their qualities. Moderate accounts propose that we also hear sounds sources: snakes as well as rattles, bitterns as well as booms. Liberal accounts 'maintain that we hear even things beyond sounds and their sources'. In fact, we need a further option, for one might grant that we can hear things beyond sounds whilst agreeing with the austere theorist that we cannot hear sound sources. In his characteristically enjoyable contribution, Sorensen

argues that we can hear silence. There is no need to think of hearing silence as hearing a source as failing to make a sound.

The various contributors disagree about a great deal. However, the majority agree that austerity will not do: source-perception must be recognized as a fundamental aspect of auditory experience. Nudds and O'Callaghan (pp.12-13) summarise four key motivations. Firstly, without source-perception we cannot explain the fact that auditory experience allows us continually to form beliefs about sources without inference. Secondly, without source-perception we cannot explain 'the fact that we act on the basis of auditory experience as if we heard sounds sources'. Thirdly, if an 'auditory experience as of the sound of a bell' is produced by 'a loudspeaker or a duck', the experience will not be veridical. Finally, empirical investigation reveals that the function of audition is to 'furnish awareness' of sound sources. In addition to these general motivations, Hamilton and Smith respectively argue that music and speech perception reveal the inadequacy of austere views. Hamilton argues for an extremely liberal view on which a wide range of features such as the virtuosity of a performance (p.166) can, in principal, figure in the purely auditory content of musical experience. Smith argues for the intriguing view that, in hearing speech, 'what we directly perceive are the *sources* of sounds, and the source of speech sounds is the human voice' (p.183).

Ironically, the austere theorist's best hope of responding to these challenges is to turn to considerations familiar from debates about visual content. There, theorists who wish to place restrictions on the admissible contents of visual experience, face a similar challenge concerning our ability non-inferentially to form beliefs about content inadmissible properties. By way of response, Millar (2000) and others appeal to the notion of a *perceptual discriminative capacity*. Applied to the auditory case, the suggestion would be that where a source has a distinctive sound, a listener possessed of a relevant discriminatory capacity will be able to judge that the source is present without inference, even if the source itself does not figure in the content of the experience.

The austere theorist can appeal to the same idea in relation to the other three considerations offered in favour of source-perception. Firstly, a discriminatory *reactive* capacity might be invoked to explain the immediacy of our reactions to sources upon hearing their distinctive sounds. Secondly, the austere theorist might diagnose the

temptation to treat auditory experience as non-veridical when a source makes a sound typically produced by a different kind of source, as falsely assuming that the misfiring of a recognitional capacity always results from a defect in the content of experience. (Note, in any case, how counter-intuitive it is to think that we hallucinate sources whenever we put on a record.)

Thirdly, consider Nudds' argument that a detailed investigation of the *function* of auditory perception determines that we hear sources. Nudds convincingly argues that the epistemological function of audition is, paradigmatically, to inform us about sources, and that, we must understand the auditory system's analysis of input frequencies in this light. However, unless we already assume that knowledge of sources is only possible if sources figure in the content of auditory experience, then it is open to us to think that auditory processing subserves the epistemological task by subserving our awareness of the distinctive sounds of objects, such that, given our perceptual recognitional capacities, we can come to know, through hearing, what is out there. On this account sources themselves need not figure in auditory content.

The two special cases of auditory perception, music and spoken language, raise a number of fascinating issues explored, more or less briefly, by almost all the contributors. Do they tell against the austere view? Consider speech perception. Two tasks are involved in making sense of speech perception. First, we must explain our capacity to understand others by hearing them speak. Second, we must explain the distinctive phenomenology of speech experience. Once again, recognitional capacities are arguably a crucial part of any epistemological story given by the austere theorist. But can an austere theorist capture the phenomenology of speech experience?

First we should ask what exactly speech is. Here both Smith and Hamilton appear to agree: '[w]hat makes a sequence of sounds into speech is that they are meaningful' (p. 149). However, it is natural to talk of meaningless speech, for example, in certain aphasias, alleged glossolalia, or the jargon of very young children. In such cases, the output is counted as speech despite being nonsense in virtue of sharing the tone, tempo, cadence and so forth of normal human speech. This suggests that the notorious contrast between hearing an 'utterly foreign language' (Smith, p.184; note the 'utterly') and one's mother tongue, is not obviously a direct consequence of meaningfulness, but rather,

amongst other things, our inability to perceptually discriminate phonetic structures in alien languages, where these structures are not individuated semantically.

If this is right, the austere theorist can maintain that hearing speech as such is a matter of discriminating distinctive features of, and (perhaps irreducibly complex) groupings of, the sounds that one encounters. It thus remains to be shown that understanding speech requires entirely novel content (e.g. voices, which after all are not distinctively associated with *speech* acts), let alone new sense modalities (as Liberman 1996 notoriously suggests; here see the excellent contributions of Mole, and Remez and Trout for discussion). As for hearing meanings, it is true that we talk of hearing the meaning in someone's words; but you do not see your friend's father, when you her father in her face.

These are but a fraction of the many intriguing issued raised by auditory experience. For one, I have said nothing about the vexed issues of ontology which are the focus of several contributions, nor the role of space in auditory awareness. Suffice to say that the ten new essays in *Sounds & Perception* are full of ideas and interest. One can only hope for the natural companion collections on *Tastes*, *Smells*, and *Feels & Perception*.

References

Liberman, A.M. (1996) *Speech: A Special Code* Cambridge, Mass.: MIT Press.
Millar, A. (2000) 'The Scope of Perceptual Knowledge' *Philosophy* 75: 73-88.