

Editorial

N Mukunda, Chief Editor

Each issue of *Resonance* starts taking a discernible shape in our editorial minds some three or four months before it is due for publication. Apart of course from trying to ensure that there is something interesting in each major subject area, we do try to group together pieces which have something in common, and so reinforce one another in the reader's mind. But some unseen mind and hand must be guiding our efforts, because once in a while we happily find (even as late as at the proof stage!) that there are commonalities which were not consciously aimed for – different articles 'resonating' at a deep level. In this issue this seems to have happened with Rahul Siddharthan's article on '*Music, Mathematics and Bach*', and with our Reflections essay by Noam Chomsky titled '*Language and Freedom*'.



Rahul describes the principal universal aspects of music, and the difficulties of defining objectively the subjective qualities of pleasant melodies and sounds on the one hand and jarring ones on the other. He concentrates on Western classical music, and in particular on the music of Bach, to bring out the ideas of scales, harmony, counterpoint and polyphony. What strikes one is that, while music is probably the most abstract of the arts (because it is nonvisual), it shows that creativity has meaning and can be achieved only within a framework of well-defined rules and disciplined activity.

Chomsky's essay on the other hand deals with the language faculty in humans, and its link to the ideal of freedom. Chomsky is one of the great intellectuals and thinkers (like Bertrand Russell and Jean Paul Sartre) of our time, whose work on language has touched innumerable areas of enquiry. He says:

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And later:

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You can see the link at a deep level. A thought-provoking essay, worth careful and repeated reading.

From music through language to words to names – we have a fair amount of chemistry too. There is a brief account of William Ramsay and the discovery of the inert gases. Then we turn to a naming problem. One of the Associate Editors of *Resonance*, J Chandrasekhar, faced a bouncer during question time after a talk at the MES Kishore Kendra School in Bangalore a few months back. A student wanted to know the names of elements with atomic number greater than 103. Not knowing the answer, the speaker should have ducked. But with quick presence of mind, he replied that the answer would be provided in a future issue of *Resonance*!

The promise is kept in this issue. J K Bera, a PhD student from Indian Institute of Science, explains the controversy surrounding the naming of the heavier elements, the scientific and emotional overtones to the problem, and how things have been sorted out.

So you say: What’s in a name? Well – plenty!

Regular readers of *Resonance* (including the Editorials) may recall an earlier instance when we responded to a frequently asked question, namely, the shapes of *f*-orbitals, with a full-sized poster. We hope to continuously keep up the effort of catering to the needs of our principal target audience of students and teachers.

