

Reductionism and the Relationship between Physics, Cambridge University, **Hasok Chang**
and Chemistry

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Gilman Building, Hall 449

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The relationship between physics and chemistry is one of the perennial foundational issues in
It concerns the very existence and identity of. the philosophy of the physical sciences
Che. chemistry as an independent scientific discipline

mistry is also the most immediate territory that physics must conquer if its “imperialistic” claim to be the foundation of all science is to have any promise

I wish to enhance the anti-reductionist position concerning the chemistry–physics relation with three arguments inspired by the works of some leading 20th-century chemists

. (1)

The very foundation of quantum chemistry is classical, and its roots go back to organic structural chemistry originating in the 1860s

. (2)

Chemists exploit for their own purposes the conceptual resources provided by physics; this may or many not involve deducing chemical theorems being deduced from physical theory

. (3)

Even physics itself is much more disunified than it may seem, and therefore constitutes a dubious basis for reduction as it is normally envisaged

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