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Introduction to ‘Levels of Abstraction’

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Forty-two years ago, as a biology student and news reporter for the Princeton University radio station WPRB, I sat in the audience at the Waldorf Astoria hotel in New York City and heard my father give a talk entitled ‘Levels of Abstraction’. Since then, I knew of no copy of the text of that talk in any journal, book, university, or family archive. Even the title of the talk was forgotten until two months ago when Dr. Rolfe Leary, a co-author of our companion paper at this conference, casually mentioned that he had retained a copy of Quine’s paper from the New York conference. He provided the typewritten preprint to me which I transcribed last month in Antarctica – the one continent that my father never visited. Philosophy and mathematics often lead the way for computer science and I believe this paper takes on a new level of relevance in an era of computer programming and big data. It is with great pleasure that I present the unpublished ‘Levels of Abstraction’ today and provide it finally for publication in the proceedings of this conference.