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The Double Simplex: Envisioning Particles and Interactions

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I will present a new way to envision the particles and interactions: a pair of interpenetrating tetrahedra that we might call the double simplex, in homage to the double helix that has just celebrated its fiftieth anniversary. Any chart or mnemonic device should be an invitation to narrative and a spur to curiosity, and that is what I intend for the double simplex. My goal is to represent what we know is true, what we hope might be true, and what we don't know–in other terms, to show the connections that are firmly established, those we believe must be there, and the open issues. I want also to express the spirit of play, of successive approximations, that animates the way scientists work.