Lay a circle down among the rectangles of the Chicago grid; you can form chords, diameters, and tangents. Now let the circle become a volume; it might be a cylinder, a sphere, or a cone. Finally, imagine acts of union, intersection, and complementation between circular and rectangular masses. Herewith, the *Kama Sutra* of the circle and the grid: a catalogue of positions and pleasures.

There are the straightforward satisfactions of the cylindrical tower (Marina City) and its complementary atrium. The tangential position and intersection, for more jaded sophisticates, yield the quarter-round corner (Xerox Building). Union configures a convex end (333 Wacker Drive), and the complementation of a cylinder overlapping at a chord leaves a concave emptiness (O'Hare Hilton).
The offspring from the union of the sphere and rectangular volume, domes and apses, populate the history books. Complementation generates the corresponding concave interiors, and pendentives are produced by intersection.
A cone cut by two parallel sides of a rectangular box and intersected becomes a frustum, another thoroughly respectable part of the architectural tradition. The complement, inverted, turns into an amphitheater (like the one by Walter Netsch at Chicago Circle), or sideways and divided, Louis Sullivan's splendid entrance to the Transportation Building at the Columbian Exposition. Union along a diameter produces a conical apse and a triangle; if the diameter becomes a chord, the triangle becomes a hyperbola—a little too tawdry for some. Intersect and you get the exotic thrill of a conical pendentive with hyperbolic arches. There is still more adventurous variation: the cone offsets its axis, intersects again, and the circle and the grid achieve a State of Illinois Center.

It was always there, waiting to be tried, a last possibility still lurking, unmaterialized, in Plato's heaven.

3 State Office Building in urban context. Photograph by James R. Steinkamp.