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The Solvay Council, 1911: “A kind of private congress”

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The photograph of its participants gathered around the conference table at the first Solvay Congress in physics has long presented an iconic image of physics in the early twentieth century, and the event has commonly been celebrated for its distinctive role in the propagation of quantum theory, as well as for the rich heritage in subsequent conferences that it initiated. Yet it is not often appreciated just how unusual this first congress or “council” was. Convened and funded by the Belgian industrialist Ernst Solvay, it was conceived and planned by the Berlin physical chemist Walther Nernst, with a zealous attention to detail that extended to entreating participants to keep its proceedings confidential until it had actually occurred. Kept private to facilitate later public notice, I will argue that this conference also helped fashion a distinctive (and selective) view of the past. This paper combines an examination of the planning and conduct of the congress with a study of the earliest uses of general concepts of “classical” theory from the late nineteenth century, in order to argue that the Solvay congress was important not just to the wider propagation of quantum theory, but to the formation of the conceptual framework within which we now cast this era and its physics: the contrast between classical and modern theory.