

“Seven years ago, . . . I first developed the principles through which I reached a rigorous and exceptionless theory of ideals . . . [as published with small changes in the *Theory of Algebraic Integers*]. Excited by Kummer’s great discovery [ideal numbers in the cyclotomic integers], I had previously worked for many years on this subject. I based this work on a quite different foundation, the theory of higher [ie., polynomial] congruences; but although this research brought me very close to my goal, I could not decide to publish it because the theory obtained in this way principally suffers two imperfections. The one is that the investigation of a domain of algebraic integers is initially based on the consideration of a definite [algebraic] number and . . . the corresponding equation, which is treated as [the modulus of] a congruence; and that the definition of ideal numbers (or rather, of divisibility by ideal numbers) so obtained does not allow one to recognize the invariance these concepts in fact have from the outset. The second imperfection of this kind of foundation is that sometimes peculiar exceptions arise which require special treatment. My newer theory, in contrast, is based exclusively on concepts like that of field, whole number, or ideal, that can be defined without any particular representation of [algebraic] numbers. Hereby, the first defect falls away; and just so, the power of these extremely simple concepts shows itself in that in the proofs of the general laws of divisibility no case distinction ever appears.”

(On the connection between the theory of ideals and the theory of polynomial congruences. (1878) As reprinted in Richard Dedekind, *Collected Mathematical Works*, vol. I, pp. 202–. . . , at pp. 202-203.)