

(6 sp.), *Pogoniris* (31 sp.), *Hexapogon* (2 sp.), and *Diets* (4 sp.). The genera *Xiphion* and *Juno*, excluded by Baker but since merged in *Iris*, included nearly 20 species, so that at that time the known plants now regarded as species of *Iris* reached about 100. A few years later (1892) when Baker published his "Handbook of the Irideae" the number of species was increased to 161, distributed among ten "subgenera" as he continued to regard them, as against six in his earlier treatment. Comparing Baker's disposition of the species with that of Dykes the greatest difference is to be found in *Pogoniris*, to which Baker assigned 52 species, while the later author assigns to it but 34 species. *Xiphium* with 14 species in Baker's "Handbook," has but 6 in Dykes's book. In some cases the later author has been unable to identify certain old names, while in others he has reduced them to synonymy.

American students have found Hasselbring's article "*Iris*" in Bailey's "Cyclopedia of Horticulture" very helpful. His treatment follows the general lines laid down by Baker, and includes 102 species.

Coming to the book before us one finds a far fuller treatment than had previously been accorded these plants, for here we have a botanical monograph of a generous type, in which there is successfully combined accuracy of scientific detail with popular directions to growers. To these matters of fact are added the exquisite colored drawings and fine printing and binding which make this a work of high artistic merit.

The botanist will notice that the author divides the genus into twelve sections, approximately equivalent to Baker's "subgenera." In eight of these the underground portion of the plant is a rhizome, while in the remaining sections it is bulbous (a bulb or corm). This character at once divides the genus into two parts—the "rhizomatous *Irises*," and the "bulbous *Irises*," and after this the sections are distinguished by their "smooth," "crested" or merely "bearded" outer segments (falls), and the seed characters (arillate, non-arillate). One third of the species (49) are found in the section *Apogon* with

rhizomatous plants, and smooth falls, and nearly one fourth (34) are in the section *Pogoniris* with rhizomatous plants, and bearded falls. In the first of these are *Iris versicolor*, *I. missouriensis*, *I. montana*, *I. verna*, etc., while in the second are *I. pumila* and *I. germanica*, of our gardens. The sections *Onocyclus* (rhizomatous, with sparsely bearded falls; 16 sp.) and *Juno* (bulbous, with smooth falls; 17 sp.), include less commonly known species. The plants of the *Juno* section look very unlike ordinary *Irises*, their leaves being channeled, instead of sword-shaped, and the standards are spreading, instead of erect. In the *Onocyclus* section is found *Iris lortetii*, of the southern slopes of Lebanon in Palestine, "perhaps the most beautiful of all *Irises*." Its large flower is quite remarkable, with its nearly orbicular falls, orbicular, erect standards (3-4 inches in diameter) and arched, crimson-red styles. "Unfortunately it seems to be one of the most difficult to cultivate among the difficult members of its class."

This fine volume is destined to become the standard book on *Irises*, and on this account must be found in every botanical library, while its beautiful plates, fine paper, print and binding will cause it to find place in many private libraries.

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*Thought and Things, or Genetic Logic.* Vol. III., Part I. Real Logic. Interest and Art. JAMES MARK BALDWIN. London, George Allen and Company; New York, The Macmillan Company. 1911. Pp. xvi + 284.

This Part I. of Volume III. of Baldwin's "Genetic Logic" opens with a résumé of the conclusions of the other two volumes, "with a view to their bearing on the problem of reality." The "logic" of "affective experience" is discussed under the title The Logic of Practise, in Part III.; Esthetic Experience is discussed in Part IV.; The Modes of Immediacy are discussed in Part V.; and in a sixth part, the new term *Pancalism* (from the motto of the work as a whole, τὸ καλὸν πᾶν) is proposed as a name for the author's philosophy,

and a program is projected for another volume which will complete the work.

Perhaps the point of chief interest to the student of science in this volume is Baldwin's solution of the dualism of inner and outer controls developed especially in Volume II. It may be remembered that the actual and the imaginative are there contrasted with each other and traced to the external world, on the one hand, and to the self on the other. This knowledge and semblance "is the universal and ever-present contrast in the meanings of cognition." The imaginative rendering is always instrumental to the actual and the true. "We make-believe in order that we may believe." "The two controls (the inner and the outer) are now adjusted to each other through the mediation of ideas or thoughts." That is to say, the imagined or merely thought, under the inner control of the self, is instrumental to the attainment of truth. The work then distinguishes two sorts of knowledge to the attainment of which the imaginative is instrumental, namely theoretical knowledge and practical. Hence arises the question "whether there are other types of apprehension which either set up still further ends or in some way reduce or reconcile the duality disclosed by these two." To this question Baldwin replies, "There is a type of imaginative cognition, I wish at once to say, that does not allow of description under either of the two foregoing headings; a type which is motivated not by the interest of completeness of knowledge or thought, nor yet by the interest of seeking satisfactions or working practical effects. There is a way of treating a content, usually and properly called 'esthetic,' that we may describe as both *over-logical* and *over-practical*, as not being strictly either of these, although involving both of them" (13). "The outcome of our investigation is that in the esthetic mode of experience so defined, we have the only inkling of the way that the self-reality of inner control which is the postulate of the practical and the worthwhile, and the thing-reality of external control which is the presupposition of knowledge and truth, *can in the process of experience come together after hav-*

*ing fallen apart* in the development of cognition."

The last statement may be regarded as the main thesis of this third volume. It means that we are interested in practical and in theoretical knowledge because of a profound esthetic impulse which finds satisfaction now in the one and now in the other. The fundamental categories of the ethico-political consciousness as well as those of the scientific consciousness are esthetic. The objects of both kinds of knowledge are comprehended in a Whole beautiful which is known in contemplation. In that Whole both the self and the world of scientific knowledge find their fulfillment and satisfaction. It is their reality.

The intellectual project of this work, and its genetic method of investigation, are most interesting; but many will find difficulties in the final results. To the present writer, the dualism of inner and outer controls seems to be a presupposition of Baldwin's entire treatment of cognition, and consequently his esthetic experience, like Kant's purposive *Urtheilskraft*, can have only phenomenal validity. Moreover, we find Baldwin's discussion of the practical quite unsatisfactory. Does Baldwin mean that *practise* can be reduced to terms of knowledge-of-practise? The section on the "Logic of Practise" is devoted to the subject of affective logic, in the sense of Ribot, and we do not find in it a recognition of the world of human action with its rights and obligations, its freedom and responsibility. Finally, the question occurs to us whether Baldwin's beautiful Whole differs much, except in name, from Bradley's Absolute; for that also is a form of immediate experience. That method of Bradley's great book and that of Baldwin's are radically different, but are their results so far removed from each other as their methods?

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*Lehrbuch der Algebra.* Von HEINRICH WEBER. Kleine Ausgabe in einem Bande. Braunschweig. Vieweg und Sohn. 1912. Pp. x + 528.

Among the advanced text-books on algebra