

From the stain they are transferred by means of a clean lifter or a glass slide to a dish of distilled water, rinsed, differentiated if necessary, suitably counterstained in the same manner, rinsed, and finally floated into place upon the surface of an albumenized slide, dried thoroughly, cleared and mounted.

The majority of our routine histological stains may be used in this way, but few, such as iron haematoxylin, presenting any difficulties. By this method a number of sections of the same tissue or organ may be stained by different methods to bring out special structural features, and then mounted side by side on the same slide for comparative study. For example, Haematoxylin and Eosin, Mallory's or Van Gieson's connective tissue stains, and Para-Carmine combined with Orcein or Weigert's Resorcin-Fuchsin may be used, and a section of each mounted together under the same cover glass. Even the most reluctant student may thus be brought to a comparative synthetic study of the structure of an organ.

In routine work large numbers of sections may be stained by an assistant in a short time, floated upon distilled water in large dishes, and issued to a class, ready for mounting, without the large expenditure of time, labor, reagents and glassware necessitated by the usual method of handling individually mounted sections. If preferred the sections may be issued directly to the students, and each can readily perform the staining for himself, using Syracuse watch glasses or similar dishes. The main points are that the removal of the paraffine from the section, and the consequent use of albumen or other fixative, xylene, absolute alcohol, and the customary series of three to five percentages of graded alcohols are all unnecessary, save in the case of serial sections of considerable extent, and in delicate cytological work. Finally it is not even necessary to remove the paraffine as a final step before mounting in balsam, if the section has been thoroughly dried, the surrounding paraffine in such a mount being entirely invisible, save with a very narrow diaphragm opening.

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#### PROFESSOR KEYSER ON RUSSELL'S "THE ANALYSIS OF MIND"

May a belated reader of Professor Keyser's notice, in *SCIENCE*, November 25, of Bertrand Russell's *Analysis of Mind* dissent from the implication that the book is written by a man specifically competent to deal with psychology? My dissent is not based on the obviously amateur quality of Russell's psychology, for an amateur may be a good observer and many of Russell's psychological passages have genuine significance. Nor do I care to stress the rather eclectic range of Russell's psychological reading. I am concerned rather with his totally non-psychological point of view. In this book, as in all his others, Mr. Russell obviously treats psychology as handmaid of metaphysics—a procedure quite as disastrous to scientific psychology when the metaphysics in question is neo-realism as when it is, say, Wolffian spiritualism. Russell himself declares that he is "interested in psychology not so much for its own sake as for the light that it may throw on the problem of knowledge";<sup>1</sup> and the fact which his reviewer correctly states, that the motive of the book is "primarily logical . . . that of reconciling two tendencies seemingly" inconsistent, "the tendency of the behaviorist to materialize mind and the tendency of modern physicists to spiritualize matter"—this fact alone rouses the suspicion of every scientifically-minded reader. For the competent psychologist writes not in the interest of logical or metaphysical reconciliations but rather with the primary intent to record and to order observed phenomena. The reviewer provides us with many other instances of the author's metaphysical manipulations. Russell's doctrine of desire, for example, as "a mere 'fiction' like force in dynamics," may be (in Keyser's phrase) "a diabolically ingenious analysis" but certainly is not a psychological conception. And assuredly Russell's agreement with the realists in the thesis that (with respect to sensations) the world is composed of a "neutral stuff" would not by anybody be regarded as a contribution to psychology.

I am not here concerned to criticize the argument, or the more plentiful assertions, on which the metaphysical conclusion of *The*

<sup>1</sup> *Analysis of Mind*, p. 15.

*Analysis of Mind* is grounded. Yet I can not forbear to call the interested reader's attention to the mortal wound which Russell himself inflicts upon his argument by his treatment, in Lecture XII, of belief. He has rested the whole realistic theory of consciousness as "neutral stuff" on the denial of the "personal" or "function" conception of consciousness.<sup>2</sup> Yet here he insists that "believing," a present occurrence "in the believer" is "an actual experienced feeling,"<sup>3</sup> a personal "attitude."<sup>4</sup> Professor Keyser, to be sure, might regard this as one of those "notably frequent public recantations of experience" which testify to Russell's "ceaseless re-examination of seeming certitudes and . . . to an unsurpassed intellectual candor." But I can not force myself to such a pitch of liberality. I am willing to grant Russell the privilege of changing opinion with every volume, of arguing in 1921 for the neutral monism which in 1914-1915 he so brilliantly refuted.<sup>5</sup> But liberality may be carried too far, and for my part I protest that nobody, be he Bertrand Russell himself, shall be at liberty in the course of a given argument to recant, publicly or privately, one of the premises of the argument itself.

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#### METHODS OF GERMAN PUBLISHERS

IN Germany the chief publishers of mathematical books and periodicals are Springer, Teubner, and Vereinigung wissenschaftlicher Verleger (a combination of the firms: Göschen, Guttentag, Reimer, Trübner and Veit). They have decided that for their mathematical publications of 1922 America shall, in general, be required to pay at least as much as \$2.40 per 100 marks of the price for Germany.

Of *Jahrbuch über die Fortschritte der Mathematik*, volume 45, part 3 (conclusion) has not been published; but part 1 (1920, 12 + 368 pages) and part 2 (1921, 6 + 526 pages) are sold in Germany for 73 and 190 marks respectively. The corresponding prices for America are \$4.65 and \$9.00! Such extortion ought

<sup>2</sup> *Op. cit.*, pp. 17 ff.

<sup>3</sup> *Op. cit.*, pp. 233 ff.

<sup>4</sup> *Op. cit.*, p. 243.

<sup>5</sup> Cf. *The Monist*, XXIV, XXV, *passim*.

appreciably to hasten the appearance of an American abstract journal, the establishment of which has been already approved by the National Research Council.

But again, *Journal für die reine und angewandte Mathematik* (Crelle), volume 151 (1920-21), is sold in Germany for 96 marks; the price to America is \$6.00!

The publisher of these two periodicals is Vereinigung wissenschaftlicher Verleger.

The above facts, obtained from the publishers themselves on May 26 and May 31, 1922, will probably suggest to mathematicians the immediate cancellation of all contemplated orders for the publications of Vereinigung wissenschaftlicher Verleger—at least.

R. C. ARCHIBALD

NEWCASTLE-UPON-TYNE,

JUNE 12, 1922

#### RUSSIAN SCIENTIFIC LITERATURE

THE officers of the Russian Entomo-Phytopathological Congress sent a request some months ago to American scientific societies and investigators to send to Russia literature on entomological and phytopathological matters.

In connection with this request the Russians promised to send Russian scientific literature in exchange. Certain difficulties, however, have been found to exist, principal among which is a regulation by the Soviet government made about two months ago which prohibits the sending out of literature from Russia without a special permit. This permit seems very difficult to get. The Russian scientific men, therefore, who have received American scientific literature in response to their request, feel much embarrassed by their inability to respond by sending Russian literature here, and I have promised to make known, in this way, the facts which have prevented their promised sending of Russian literature to those Americans who have kindly sent scientific papers to them.

VERNON KELLOGG

#### QUOTATIONS

##### PHYSIOLOGICAL EFFECTS AT HIGH ALTITUDES

IN the Friday evening discourse delivered at the Royal Institution last week Mr. Joseph