

METAFRAME
LOW-PRICED
VISUAL
**SCIENCE
AID KITS**

THOUSANDS
NOW IN
CLASSROOM USE

FROM
\$2

**AQUARIUMS
AND KITS**

TERRARIUMS

**REPTILE
TANKS**

**RODENT
CAGES**

Thousands of teachers, students and research scientists know and depend upon the rugged Metaframe Visual Science Aid Kits. Engineered for safe and extensive use, Metaframe is featured at low, sensible prices.

Write for complete details now!

- **SAFE • ESCAPE-PROOF**
- **GALVANIZED WIRE SCREENING**
- **RUST-PROOF**

FREE

Fully illustrated literature with prices on complete line of Visual Science Aid Kits
METAL FRAME AQUARIUM CO.
Pine Brook, New Jersey

NAME _____

COMPANY OR INSTITUTE _____

ADDRESS _____

CITY _____ STATE _____

others besides Professor Zhdanov might be interested in these reasons.

"I am honored to have your invitation and would normally have been delighted to attend the Congress, to visit some of the cancer research laboratories in the U.S.S.R., and to participate in your program. However, the resumption of the atmospheric bomb testing by the U.S.S.R. some 2 months ago has caused me deep concern, and this has given way to indignation within the past week, when it was announced that a bomb of about 30-megaton size was first exploded, and then, in direct defiance of an urgent plea signed by 87 members of the United Nations, a second bomb estimated at about 60 megatons was exploded on October 30.

"I am convinced that this series of explosions, culminating in this latest one of frightful magnitude, will cause the premature and unnecessary death of at least a few individuals in the world from leukemia or bone cancer and must therefore be considered an outrage against society. In protest, I must forego attending the VIII International Cancer Congress and am therefore forced regretfully to decline your kind invitation."

HENRY S. KAPLAN

Department of Radiology,
Stanford University School of Medicine,
Palo Alto, California

Auditory-Oculomotor Reflexes at Birth

Wertheimer has made an interesting and significant discovery in finding that the newborn infant will move his (or in this case, her) eyes toward the side on which auditory stimulation is received [*Science* 134, 1692 (1961)]. But he then goes on to say: "This finding is not compatible with the view that space perception, and particularly cross-modal spatial coordination, is based upon a long and arduous learning process." In saying this he either attacks an enemy who no longer exists or he goes way beyond his data.

If Wertheimer means that not all aspects of perceptual organization involve learning, I can agree without reservation; but this has been shown repeatedly, and no one now holds this view (it has not been defended in the past 30 years). Alternatively, however, showing that there are reflexively coordinated and unlearned components obviously does not show that the full

NEW 2" PHOTOMULTIPLIER



CBS Laboratories' 14-stage CL-1090 is the only photomultiplier tube combining

LOW DARK CURRENT WITH
FAST TRANSIT TIME

At A Gain Of	Max. Anode Dark Current
10,000,000	0.03 microamperes
30,000,000	0.1 microamperes

The CL-1090 is uniquely designed for high-speed, low-noise coincidence counting.

The rugged multiplier structure makes this tube ideal for space applications; shock and vibration specifications are guaranteed by CBS Laboratories.

A catalog of detailed specifications of the CL-1090 and other tubes in the CBS line of photomultipliers is available on request.

**CBS
LABORATORIES**

STAMFORD, CONNECTICUT
A DIVISION OF COLUMBIA BROADCASTING SYSTEM, INC.

normal development of space perception is independent of the stimulation normally received from a varied environment.

It is apparently still difficult to escape from the false dichotomy of an extreme nativism versus an extreme empiricism. Neither view can be taken seriously today.

D. O. HEBB

Department of Psychology,
McGill University, Montreal, Canada

I must agree with Hebb: the demonstration that a human neonate was able to turn her eyes to the side on which auditory stimulation was produced does not in any way exclude the possibility that space perception in the human adult is greatly influenced by experience. But one need not share his optimism—much as one might wish to—about the demise of extreme views.

In his stimulating *The Organization of Behavior* (Wiley, New York, 1949), Hebb himself concludes that all that is present perceptually at birth is discrimination of the "primitive unity" of figures, not their shape or identity as distinctive wholes—these, and by implication other aspects of adult perceptual performance, are "slowly acquired through learning." My little experiment demonstrates that, without learning, more is present than primitive unity: primitive space perception.

MICHAEL WERTHEIMER

Department of Psychology,
University of Colorado, Boulder

Scientific Consultants

Your item in "Science and the news" on scientific consultants [*Science* 134, 1739 (1 Dec. 1961)], their high pay, their conflicts of interest, and so on, neglects a point.

The highly paid employees of the nonprofit corporations can also be fired without regard to Civil Service regulations. They can be promoted and shuffled around, likewise. Their work is subject to the criticism and approval not only of congressional committees but of the Service and Civil Service employees of the Department of Defense. The impending investigation, so long as it avoids excesses and abuses, is merely a normal exercise of prudence that should be welcomed by all.

WILLIAM GEORGE MACKENZIE
Blue Bell, Pennsylvania

VERSATILITY OF TECHNIQUE EXPANDED

Thin Layer Chromatography Advanced With Introduction of Improved Variable Thickness Applicator

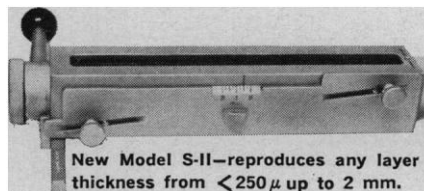
Desaga Delivers First New Instruments GUARANTEEING Uniform Layers

by Klaus P. Brinkmann

Since its commercial introduction in the United States, by Brinkmann, in the fall of 1960, Thin Layer Chromatography has become the fastest growing

analytical method and has been installed in more than 500 U. S. laboratories. However, the ability to develop a versatile apparatus, to improve it and to provide new accessories to expand the application of a technique, is directly related to experience in a particular field.

While the original Desaga apparatus, according to Stahl, has become the most widely used equipment, a substantial advance over the first adjustable applicator is now available. In addition, a number of unique and exclusive accessories are offered for the first time. These include:



- 1) An improved adjustable applicator—model S-II. This instrument permits the user to select and reproduce any layer thickness from less than 250 μ up to 2 mm. The novel parallel sliding design completely eliminates the possibility of a layer whose thickness is not uniform across the entire plate—a problem which is inherent in a variable thickness model unless both sides of the exit gate are individually supported for rigidity and centrally regulated by a common thickness control to assure a uniform calibrated height.
- 2) Removal of layers—a major technological breakthrough in TLC now permits the user to remove complete layers from the glass plate with our new adhesive film. This technique facilitates preservation, elution and photometry.
- 3) Chamber for small quantities of solvent—a special unit consisting of a plate holder and liquid chamber permits separations on individual plates with a minimum of solvent material.
- 4) Utility "kit" for TLC—provides an inexpensive complete TLC apparatus for smaller laboratories and occasional requirements.
- 5) Pyrex brand glass plates—new high temperature glass plates for scorching techniques and for obtaining a high activity stage with alumina.
- 6) Improved Silica Gel G—now produces even better results through manufacturing techniques which result in an even more uniform particle size.
- 7) New Cellulose Powders—ion exchange and acetylated cellulose powders are now available.
- 8) New indicator sprays—in aerosol container are now available.

For complete information and new Bibliography of almost 300 references, please request "TLC Bulletin #5."

BRINKMANN

INSTRUMENTS, INC. 115 Cutter Mill Road, Great Neck, N.Y.

PHILADELPHIA • CLEVELAND • HOUSTON • MIAMI • MENLO PARK, CAL. • ST. LOUIS