

Infant vocal response

Studies of language development in infants are usually conducted with children older than 18 months, or after they have acquired the basic sounds of their language. R. L. Webster, M. H. Steinhardt and M. G. Senter of Hollins College in Hollins College, Va., have studied preverbal vocalizations of seven-month-old infants in an attempt to determine what factors produce subsequent vocal response.

The experimental set-up consisted of three successive five-minute periods. A baseline period recorded spontaneous vocal behavior. A stimulation period recorded vocal behavior during tape recordings of vowel sounds. The final period recorded vocal behavior after the stimulus. Each of 12 infants was tested two times with a high-pitch voice and two times with a low-pitch voice. The number of sounds decreased below the baseline during stimulation and then increased to higher than the baseline afterward. The decrease was greatest during the high-pitch stimulation. The increase was greatest following the low-pitch stimulation. Following the high-pitch stimulation the infants' sounds became more high-pitched. In the July *DEVELOPMENTAL PSYCHOLOGY* the researchers suggest that the acoustic frequency of sounds presented to an infant may be a determinant of vocal response characteristics.

Pick a color

Many people have a favorite color. This could indicate a simple visual preference for that color or it could mean something much more significant. Assador Choungourian of Pennsylvania State University in University Park, Pa., feels that color preferences can be used to differentiate personality types. He has attempted to determine the specific color preferences of extroverts and neurotics. At the American University of Beirut, Lebanon, undergraduates were divided into three groups according to their scores on a personality test. Eighty extroverts, 80 neurotics and 160 undifferentiated controls were selected. There were equal numbers of men and women and equal numbers of students from the United States, Lebanon, Iran and Kuwait.

Red, orange, yellow, yellow-green, green, blue-green, blue and purple cards were presented in a preference test. Choungourian reports in the June *PERCEPTUAL AND MOTOR SKILLS* that neurotics significantly prefer red and purple more than extroverts, while extroverts significantly prefer yellow-green more than neurotics.

Drug collections

Either the narcs are getting sharper or there is more dope around or both. The Department of Justice announced last week that the fiscal year ending June 30, 1972, was a record year for getting dope off the streets. Based on estimated street prices, the Bureau of Narcotics and Dangerous Drugs rounded up \$676,590,347 worth of illicit narcotics and dangerous drugs in the United States. This is 10 times more than last year's take. With help from foreign governments another \$892,931,440 worth of drugs was kept from entering the country. The total kept off the streets was more than \$1.5 billion and it included two and a half tons of heroin and 207,094,395 dosage units of various other dangerous drugs.

A differentiated moon

Results from the orbital X-ray fluorescence instrument flown on Apollo 16 confirm the "first look" data during the mission: that the lunar highlands are rich in aluminum/silicon and relatively low in magnesium with the reverse being true of the maria (SN: 5/6/72, p. 292).

A group led by Isidore Adler at NASA's Goddard Space Flight Center reports in the July 21 *SCIENCE* that the data are consistent with the idea that the moon has a widespread differentiated crust on the highlands (SN: 7/1/72, p. 12). The aluminum/silicon and magnesium/silicon concentration ratios correspond to those for anorthositic gabbros, gabbroic anorthosites or feldspathic basalts. It is important to note, however, says Paul Lowman, that the data show the highlands are not composed of pure anorthosites—that magnesium is found throughout the highlands although the concentrations are less there than in the maria. At the Descartes site the ratios for aluminum and silicon were $.67 \pm .11$, and for magnesium and silicon, $.19 \pm .05$. The farside highlands west of Mendeleev show aluminum and silicon ratios of $.71 \pm .11$, and for magnesium and silicon, $.16 \pm .04$. The ratios in the upper part of the Sea of Clouds are: aluminum and silicon, .39; and magnesium and silicon, .20.

The Cayley formation in the crater Ptolemaeus has aluminum and silicon ratios that fall in an intermediate range between the highlands and maria suggesting that the Cayley there is probably feldspathic basalt, a volcanic rock. Since the Cayley at Descartes site did not appear, after the first look, to be volcanic, Cayley itself may not be uniform in age or composition.

Limiting accretion velocities of silicate flakes

Most theories about the origin of the solar system include planetary formation through accretion—series of collisions between solid grains in intersecting orbits under conditions which result in a net transfer of mass to some of the grains. (The grains would have condensed from gas.) Compositions of the planets indicate that most of the accreting particles were probably silicates. John F. Kerridge of the University of California at Los Angeles and James F. Vedder of NASA's Ames Research Center report in the July 14 *SCIENCE* the results of an experiment that sets a limit on the possible velocity ranges for silicate accretion. They conclude that accretion of silicate flakes would not have occurred during impacts in the velocity ranges from 1.5 to 9.5 kilometers per second, which they studied using artificially accelerated flakes. Accretion probably occurred at velocities slower than 1.5 kilometers per second.

OAO to be named Copernicus

The fourth and last orbiting astronomical observatory (OAO), to be launched around Aug. 21, will be named Copernicus to commemorate the Copernican Year beginning formally Feb. 14. The year will be the 500th anniversary of the birth of the Polish astronomer.

The first and third OAO's failed (SN: 12/5/70, p. 427). This last OAO will carry two instruments: an 82-centimeter reflecting ultraviolet telescope to record emissions over the wavelength range from 1,000 to 3,000 angstroms and a small X-ray telescope.