tention deficits, then the present drastic procedure should have produced at least some effects.

It is also clear from the results of the "black bag, ECS 2.0 second" group that the effects of ECS are independent of location of the rat at the time of administration of ECS. These results, utilizing a drastic change of stimulus cues, confirm those which Leonard and Zavala (*4*) found with a less drastic one. It would appear, therefore, that the retention deficits produced by ECS in this study cannot be accounted for in terms of a learned interference analogous to retroactive inhibition, and are the result of a true amnesia, probably brought about by physiological changes.

The brief GS-ECS interval necessary for amnesia in this study shows excellent agreement with the temporal curve recently observed by Chorover and Schiller (*5*). However, since other studies have shown significant retention deficits with much longer ECS delays, this leaves a puzzle. It is possible that these differences may be in part the result of different task and procedural variables employed in "one trial" situations. For example, studies which have shown significant ECS effects with long GS-ECS intervals have generally used learning tasks in which the subjects have received considerable training under deprivation of food or water before the punishment shock is administered (*6*). It is possible that the greater response strength before punishment in these studies is a factor determining the effective ECS interval. On the other hand, it is possible that different stages of the consolidation process are disrupted by different intensities of ECS or by different types of treatment. Further information on the foregoing possibilities should give clues to the physical basis for the memory process.

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Dental Caries in Tehuacán Skeletons

In "Human skeletons of Tehuacán" [*Science* **148**, 496 (1965)], J. E. Anderson says, in reference to a low rate of increase in the incidence of dental caries coincident with the change to agriculture:

> An explanation for this unexpectedly low increase is that the water of the valley is rich in minerals, and these were deposited (even as now) on the teeth as a heavy calculus which effectively plugs potential caries sites.

While I do not question that such a deposition of calculus might result in less caries, I must question the ascribed causation of the heavy calculus deposits. The congenital enamel pits described occur on the palatal surface of the maxillary molar and on the buccal surface of the mandibular molars. Neither location is normally associated with calculus deposition, as this usually occurs adjacent to duct openings of major salivary glands (on the lingual surface of the mandibular incisors and the buccal surface of the maxillary first permanent molar). Assuming, then, that Anderson is referring to the buccal pits on the lower molars, normal calculus deposition would not occur in this area. It is doubtful that a high mineral content of ingested water would contribute to the deposition of calculus, if only because the exposure of the minerals to the oral environment is very brief. However, as I have seen such depositions in Guatemalans, a more logical explanation is suggested. In these populations, as in Anderson's, the main carbohydrate staple is maize, usually consumed as tortillas, prepared by grinding the maize kernel into a dough after prolonged soaking, either in lime-water solutions or in water to which wood ash is added. When eaten, this foodstuff, which is still very alkaline and high in concentration of calcium and phosphate, tends to accumulate in areas which are poorly self-cleaning (such as the buccal surface of mandibular molars); hence conditions are optimum for the precipitation of calcium phosphate as calculus deposits in these areas.

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