postsynaptic potentials of up to 80 msec (*20*) and inhibitory postsynaptic potentials in the brain often have durations exceeding 100 msec (*13*, *15*).

The remarkable isomorphism between the poststimulation neural excitability cycle and our behavioral results indicates that the same function expressing response strength in terms of stimulus rate holds for overt behavior as well as for neuronal behavior. This indicates that, with the C-T technique, the overt response of the organism can be a useful measure of the behavior of the neurons involved in mediating that response and also of their structural properties. In addition to the general importance in terms of the validity of the technique, the import of these results for the understanding of pain are as follows. (i) They suggest that several sizes of fibers are involved in mediating pain or aversion at the level of the midbrain. (ii) They indicate not only that the synaptic mechanism of temporal summation exists for pain at this midbrain level but also that it follows a surprisingly long time course and may be related to Stevens' power law. This relation is important since Stevens has thought that his law only applied at receptors (*21*). (iii) Taken together, points (i) and (ii) show that the type of coding of pain information as a function of fiber size and synaptic integration which Melzack and Wall (*3*) attribute to a gating mechanism in the spinal cord can also be produced at higher brain levels. (iv) The subsidiary finding that behavioral habituation to aversive brain stimulation occurs if fibers are stimulated too rapidly, as predictable from neural adaptation, suggests that this mechanism may be important centrally in the control of pain (*22*) and raises the possibility that some behavioral consequences of electrical stimulation are the result of central nervous tissue being shut off at certain frequencies of stimulation rather than excited. (v) Finally, since most of the phenomena used to explain the compound curve in this paper have been identified classically in preparations having none, one, or only a few synapses between input and output, the question arises as to why they are detectable in the complex multisynaptic preparation that is the conscious freely moving animal. One possible answer is that the precise timing of the C-T variable is lost at the first synapse and is thereafter reflected in different levels of general activity in higher pain mechanisms, of which the behavior is a linear function.

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Earthquake Occurrence in the State of Washington

Year before last, my student C. H. Cramer, then an undergraduate at the University of Puget Sound, Tacoma, Washington, prepared a time-lapse moving picture of earthquake occurrences in the State of Washington that is an interesting counterpart of Richter's analysis (*1*). The background is the state geologic map; two frames correspond to 1 day, and earthquakes are shown as light flashes, the location being that of the epicenter and the brightness of the flash being a measure of the magnitude of the earthquake.

When the film is viewed (for this purpose a manual editor-viewer, with which the film can be moved forward or backward at an arbitrary speed, is superior to a regular projector), it reveals a remarkable story of alignments of epicenters, earthquake swarms, stress buildup and release, and other features. The lines along which earthquake swarms occur are in complete agreement with offsets of gravity trends revealed by my analysis (*2*). Moreover, those lines, cutting across the Cascade Mountains, pass almost exactly through the andesitic Cascade volcanoes.

Is it, then, conceivable that the volcanoes develop along those planes of offset where fresh basalts come in contact with the acidic batholith, and are thus quartz-enriched?

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