the external sheath or membrane. Therefore, in isolated fibers the electrical conductivity of the myelin is greater than the conductivity of the Schwann membrane.

The physiological role of the myelin is, of course, to determine, together with the Schwann membrane, the values of the natural units of length λ and of time τ and therefore the manner in which the action currents spread electrotonically ahead of the traveling nerve impulse. When its conductivity increases, the myelin layer can no longer fulfill its role. Therefore, it can properly be said that the myelinated fibers of desheathed nerves are partly demyelinated fibers, and that the isolated myelinated fiber actually is a demyelinated fiber.

Summary.—Applied cathodal currents can initiate impulses at all points of the internodes of the fibers of desheathed nerves. However, important periodic variations of threshold appear because, as a consequence of damage done by removal of the sheath, the juxtanodal segments of the internodes undergo a certain degree of depolarization, and demarcation currents flow in the direction from the centers of the internodes toward the juxtanodal segments. In the fibers of desheathed nerves the electrical resistance of the myelin layer is much smaller than in normal nerve fibers. In isolated nerve fibers the resistance of the myelin is so low as to be negligible. The isolated myelinated nerve fiber actually is a demyelinated nerve fiber.

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*RECENT VARIATIONS IN THE SEASON OF BIRTH IN PUERTO RICO**

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During a study of the season of birth in various portions of the world where such data are available, it was noticed that a peculiar demographic situation was occurring in Puerto Rico[1, 2] during the period from 1941 through 1961. Unfortunately, no data were available prior to this time. Essentially, for the first five-year period (1941–1945) the pattern of the season of birth is largely European.[3] The subsequent five years show an European pattern modified by the beginning of a North American periodicity. The third period indicates the European pattern changing slightly, while the North American one is becoming greatly enhanced. During

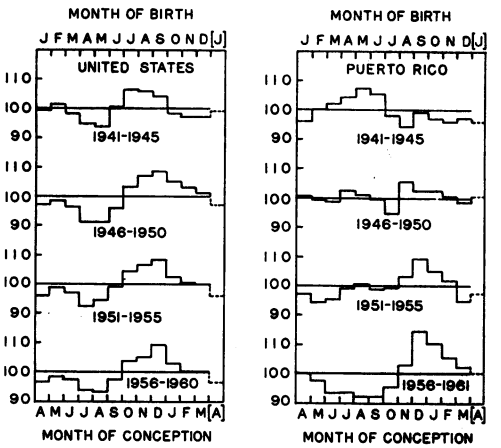

FIG. 1.—The season of birth in the continental United States and Puerto Rico for the following periods: 1941–1945; 1946–1950; 1951–1955; 1956–1961. Each bar represents the number of births for a normalized month of 30 days, relative to the mean monthly value taken as 100.

the last five-year sequence, the European periodicity has been eliminated and only the North American pattern remains.

Fundamentally, the European pattern has a primary peak in births in the spring with a secondary one in September and two minima in November and August. In Puerto Rico (1941–1946) the major maximum in births occurs in May, a minor one in September, with the minima appearing in November and August.

During the 1920's,[4] the continental United States exhibited a primary maximum in births in August and September which shifted to July and August in the 1930's, remaining there during the war, but afterward reverted back to the peak prevalent during the 1920's. The secondary maximum occurred in February and March throughout this whole period. The annual low appeared during April and May in the 1920's, the war, and subsequently. During the 1930's this minimum occurred in December, and the secondary low appeared during April and May. The secondary low occurred in December and/or January during the 1920's, the war, and since the war. With minor variations, the continental United States appears to exhibit a relatively stable pattern of the season of birth.

In Puerto Rico (1946–1950) the primary peak in births occurs in August with the secondary one appearing in April. The two minima are in July and December. Hence, this period reflects the prevalent maximum exhibited in the continental United States during the 1930's and the war, yet at the same time it retains the European peak in the spring. The minima appear in July and December, the latter one remaining in common with the North American pattern.

During the subsequent five-year period in Puerto Rico, the September maximum is greatly enhanced while the secondary high, appearing in May, is becoming smaller. Minima occur in February, December, and June. The North American pattern is becoming slowly more apparent while the European one is being eliminated.

The most recent period for which data were available indicates that the Puerto Rican pattern has become entirely like that of the continental United States. A huge maximum appears in September and the annual low occurs in May and June. The old European pattern is no longer in evidence. Instead of a slight rise in February, as is typical of the continental United States, the secondary high occurs in January.

The data for the United States and Puerto Rico are depicted graphically in Figure 1 for five-year periods from 1941 through 1961. Data were unavailable for the United States in 1942 and 1943 and for Puerto Rico in 1960.

Examination of various portions of the world where monthly natality statistics

were available has shown that, with the exception of the northern section of the New World, the season of birth is largely meteorologically controlled.[3] This does not appear to be the case in either Puerto Rico or the northern continental United States. It would be expected that both these countries would reflect portions of the typical European pattern. Puerto Rico, at the beginning of the war, resembles a basic European pattern, which over a period of 14 years becomes analogous to that of the continental United States. On the other hand, during the last 42 years the continental United States has exhibited a relatively stable pattern in its birth season. At the same time, it is not an improbable hypothesis that the island of Puerto Rico showed a relatively stable, European-type birth pattern until after the war. The question naturally arises as to the mechanism for such a major change. Since the change occurs from a European-type pattern to an American one, it would not be presumptuous to assume that this also implies a greater contact with things American. It seems unlikely that changes of this kind could be due to large groups of itinerant travelers from the continent. It is more likely that mass communication in the form of daily newspapers, radio programs, and television shows is responsible for bringing about such a change. The most popular television programs in Puerto Rico are continental American in origin. Human interest stories and human problem-type columns are reproduced in Puerto Rican newspapers and are read avidly by the population. It is also of interest to note that many of the television programs that originate on the continent are reproduced bilingually for those Puerto Ricans who are not conversant in English. A reasonable hypothesis for bringing about such a change in such a short time among such a large group of people would be the system of mass communications.

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*THE ACTION OF STREPTOLYSIN S ON PERIPHERAL LYMPHOCYTES OF NORMAL SUBJECTS AND PATIENTS WITH ACUTE RHEUMATIC FEVER**

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The human peripheral blood lymphocyte provides a readily available *in vitro* system, representative of the donor's immune status.[1] This cell responds to specific antigens to which the donor is sensitized, as well as to certain nonspecific stimulants, such as phytohemagglutinin (PHA), an extract of the kidney bean, *Phaseolus vulgaris*. PHA has been used for the past 5 years as a mitogenic agent for lympho-