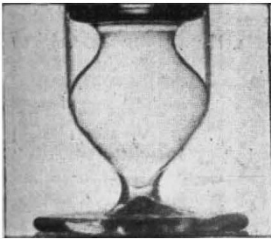


### The Formation of Stable Columns of Liquids.

WHEN a liquid of slightly greater density than water is poured into a shallow layer of the latter, it is often possible to produce the formation shown in the accompanying photograph, in which the heavier liquid appears as a column of curved outline, stretched by its own weight, and hanging from the surface of the water. By performing the experiment in the following manner, the production of the column is rendered easy and certain. A test-tube of the dimensions shown in the photograph, preferably furnished with a foot, is filled to about one half the height of the hemispherical end with water, and 5 to 10 c.c. of aceto-acetic ether are then added. Usually, the formation of the column is automatic; if it should fail to form the contents should be shaken up, and the test-tube allowed to stand for a short time, when the liquids will settle as shown. Water globules entangled in the aceto-acetic ether may be removed by drawing to the side with a wire.



If the original layer of water be too deep, the column will break at its narrowest part, and the same occurs if water be poured gradually into the tube after the column has formed. By varying the width of the vessel, a great variety of shapes may be obtained, all of which are perfectly stable. The water is in all cases displaced from the lower part of the vessel, and bounds the sides of the

column of heavier liquid. Similar results may be obtained with aniline, orthotoluidine, butyl benzoate, and some other liquids; but in these instances the manipulation is rather more difficult, owing to the tendency to break up into separate globules. By placing the test-tube in a flat-sided vessel and surrounding with water, the column may be projected on a screen, thus furnishing an interesting lecture experiment on the subject of surface tension.

CHAS. R. DARLING.

### THE CORONATION.

FROM the point of view of social psychology to-day's great ceremony may be said to bind together in a circle of symbolism the past history of the English people and the present interests of the British Empire. From the point of view of individual psychology it may be regarded as a symbolic elevation of human personality to its highest power.

It is an interesting problem for the sociologist how far a given social ceremony succeeds in realising a modern content in an ancient form. The relation of form and content in social ceremonies and institutions alike is analogous to that of structure and function in organisms. But the inertia of social forms is far greater than that of organic structures, for in the case of the latter there is neither sentiment nor tradition to assist survival.

The development of the ceremony of crowning from Greek and Roman times is clear, but the origins of the crown-symbol itself are still obscure. Outside the sphere of classical antiquity its use is rare. But within it, as in mediæval and modern Europe, the crown is, next to the King, the central feature of coronation. Not only in popular language, but in legal phraseology, it is a synonym for the kingly office itself. It has, in fact, long ago superseded unction as the central element of royal investiture, making the recipient a king rather than a priest.

The crown of the kings of Egypt was, like regalia generally, considered divine. Kings of the Yorubas

sacrifice sheep to their own crowns. In South Celebes it is the regalia that reign; the king is but their representative. If we attempt to penetrate to the strata of early custom which preceded the Greek and Roman kingly crown, the Athenian crowns which were given, just as ribbons of the Legion of Honour are given, the Roman crowns corresponding to the Victoria Cross and similar honours, the Greek wreaths of sacred leaves won in the games, and even the oak chaplet of the early Roman kings identifying them with the oak-god, we may follow some such line as the following. Like unction, crowning had its origin in personal decoration or accoutrement. Savage chiefs are sometimes invested with a girdle. Just as ankle and wrist straps and the like are frequently worn by rude peoples for the practical purpose of protecting the joints and ligaments, and afterwards attract superstitious ideas, such as the idea that they prevent the soul from escaping, so it may have been with the head-band or head-dress, originally used for protection or for confining the hair. The brain being the crown of the human organism, the head has always received honour. From this point of view the crown is the one royal symbol likely to be retained by enlightened peoples, who for various reasons retain kingship.

Coronations in other latitudes are instructive. Investiture with a special or sacred dress is frequently the main feature. The king-elect of the Aztecs went in procession to the temple. Here, after paying homage to the god, he was anointed over the whole of the body by the high priest, and sprinkled with holy water. The unguent was a black oil of rubber. He was then clothed in ceremonial robes, and about his neck was hung a gourd containing remedies against sorcery, disease, and treason. Hindu coronations took the form of a baptism or an unction. Eighteen ingredients were required for the holy water, one being the water of the sacred river Sarasvati. After a preliminary sprinkling, the king received a bow and arrows, with which he symbolically conquered the four quarters of heaven and earth. Then, seated on a tiger-skin, facing the east, he received the holy water in a shower from a rose-head of gold. Four officiators poured it. Many prayers were recited meanwhile, some "to enable him to discharge his duties," others to the "divine quickeners"; others stated that he was being consecrated by the gods, and being filled with divine force. Vigour and vitality, royal and priestly dignity, were contained in the ingredients of the holy water. His head was then adorned with stalks of holy grass and ears of corn. At the end he quaffed a draught of the sacred soma. His hair was not to be cut for a year after the ceremony. In modern times a Rajput raja is anointed with sandal-paste and rose-water, and the priest marks his forehead with the sacred Tika symbol. When the raja of the Bhuiyas is consecrated, a chief winds a flexible creeper round his head-dress to signify that he is "Lord of the forest."

Ellis describes the installation of Tahitian kings. The king bathed, and was then ceremonially struck by the priest with a sacred branch. He was then girded with a sacred girdle of red feathers, which rendered him divine. In old Siam the king was placed under the seven-tiered umbrella, the great symbol of royalty. A crown and a collar of diamonds were placed upon him, and he received a golden tube containing his name. In old China the king (like Plato's philosopher-kings) deprecated his elevation, declaring himself to be unworthy. No crown was used; the king was seated upon the throne of the Nine Heavens. In Abyssinia, that most curious pioneer of Christian kingdoms, there