

at an object shown her on the day following her operation saying, "that the light was offensive to her eye, and that she felt very stupid; meaning that she was much confused by the visible world thus for the first time opened to her."

The same woman reported later, "I see a great deal, if I could only tell what I do see; but surely I am very stupid." And "All that I can say is, that I am sure, from what I do see, a great change has taken place; but I cannot describe what I feel."

Fear of the sight of objects is another subject that interests the psychologist studying these cases. Are people born with an instinctive fear of the sight of certain shapes or things? The answer seems to be in the negative. None of the reports indicate that the subjects

felt any particular fright upon looking for the first time at animals, or shadows, or any particular forms.

"We have failed to find good evidence that visual preferences, interests, or fears are unlearned or that reactions to distance are unlearned," Dr. Dennis concludes. "On the other hand, it may be urged that the negative results are not decisive for several reasons. The chief of these lies in the non-quantitative as well as in the incidental nature of the observations."

Further study of such cases and more detailed research from the psychological point of view is urged by Dr. Dennis.

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PHYSIOLOGY

## Masculine Hair Bristling Due to Skin Thickness

WHEN Johnny answers parental reproaches about the tousled state of his hair with a despairing or even defiant "I can't help it; it won't lie flat," he is quite right. There is now scientific evidence for his contention, although neither he nor his parents are likely to know about it. (*Anatomical Record*, Feb. 25).

The general tendency of masculine hair to bristle, to stand on end and to resist steadfastly all efforts to flatten it is due at least in part to the thickness of skin on masculine heads. This appears to be the conclusion drawn from measurements made on nearly a hundred scalps by Elizabeth Upham and Walter Landauer of Storrs, Conn., Agriculture Experiment Station.

These scientists measured the thickness of top and under layers of skin and the angles between the hairs and skin. The thinner the top skin the smaller the angle, that is, the more sloping are the hairs, they found. Presumably, the more sloping the hairs, the easier it is to make them lie flat against the head, since that would seem to be their natural tendency. What is more, the Connecticut scientists found the thinner top skins on feminine scalps.

Hair angle and skin thickness are only part of the story. Even more important influences on the slope and direction of hair, the scientists believe, are the forces of stress acting on the

skin during embryonic development. Which still gives Johnny a scientific "out." He really cannot help it if he was born with unruly hair.

The measurements also suggest a question of possibly considerable interest to Johnny's father. The average thickness of the top layer of skin, scientifically termed cutis, is smaller on female than male scalps, while the under layer, called subcutis, is thicker in women than in men, on the average.

Does the greater thickness of subcutis on feminine heads provide better anchorage for the hair and thus account for the lesser tendency to baldness among women? Or does the greater angle between hair and scalp in men make it easier for masculine hairs to fall out?

Unfortunately, science provides no answer at present. The Connecticut scientists do not even mention the cosmetically important matter of baldness. Still more unfortunately, science can probably provide no remedy for baldness even if the answer is yes. Finding a way to change the thickness of the skin layers on top of men's heads does seem beyond the ability of modern science, despite its many apparently miraculous achievements.

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New York State has been completely free from smallpox for over two years.

ARCHAEOLOGY

## American Mummies Found Well Preserved

MUMMY bundles, removed from ancient graves in Peru, have been opened at the Field Museum of Natural History, revealing bodies of Americans well preserved since prehistoric times.

Desert-like dryness of the Peruvian coast is responsible for the state of the bodies, explained J. Eric Thompson, assistant curator of Central and South American archaeology.

Prehistoric Peruvian Indians did not usually preserve their dead by artificial devices, as Egyptians did, though resin was sometimes applied as preservative, and the viscera removed. In place of Egypt's mummy cases, South America had the custom of bundling a mummy in layer after layer of beautiful robes and shawls, with ornaments and personal possessions stuck in among the folds. A false head, added to the final shapeless pack, was usually a sign that the dead individual had been important, said Mr. Thompson.

Two 700-year old graves from the cemetery at Ancon, where the mummies were obtained, have been reproduced at the Museum, showing unopened mummy bundles surrounded by stores of food and household equipment. One grave contains women's work baskets, spindles, and silver ornaments.

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PALEOBOTANY

## Infrared Light Useful In Study of Coal

INFRARED radiation, the "dark invisible light" that lies just below the lower end of the visible spectrum, has been found useful in the study of fossil leaves found in layers of coal, by Prof. John Walton, paleobotanist of Glasgow University. (*Nature*, Feb. 16).

Fern-like leaves in coal are usually studied by lifting them off, carefully spread out on some adhesive substance on a glass slide, which permits them to be handled under the microscope. Frequently they are so dark as to be quite opaque to both eye and camera, with ordinary light. But to infrared radiation many of them are transparent, permitting fine details of structure to be photographed.

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