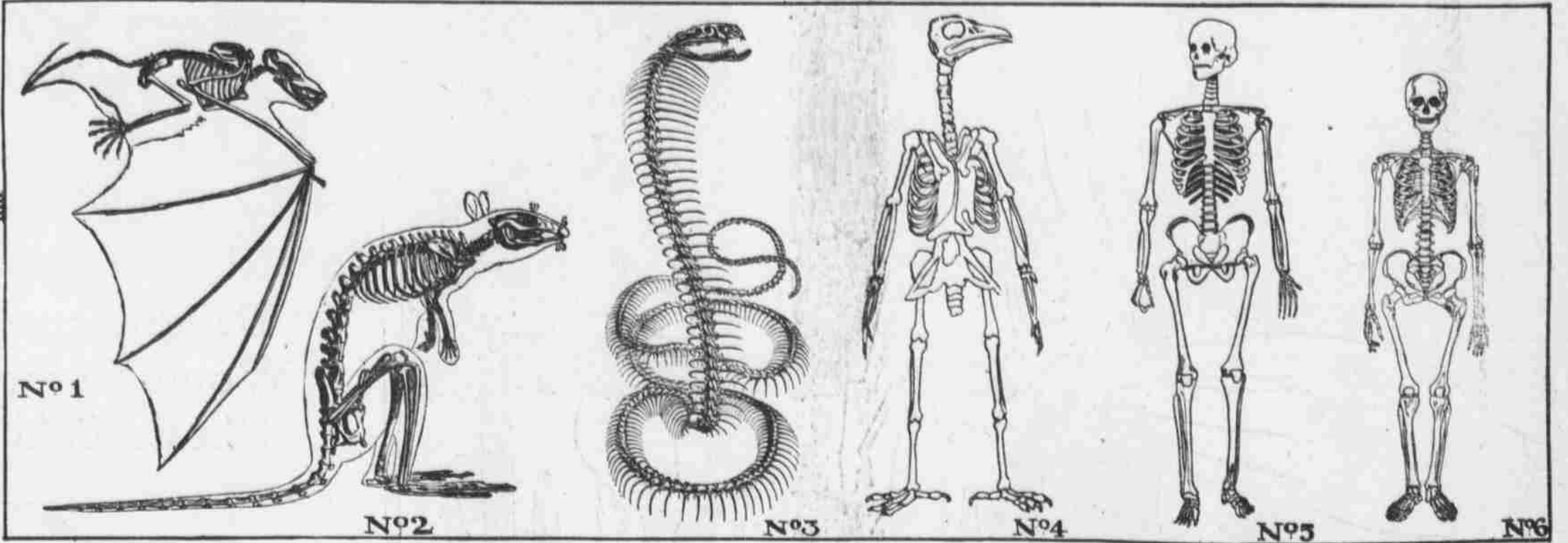


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"WOMEN Will Rule the Air"



No. 1—The Skeleton of the Bat, Illustrating the Quadrupedal or "All Fours" Position of Flying. The Primitive Tendency of Woman Toward That Position Gives Her One Advantage Over Man in Running the Aeroplane.

No. 2—The Skeleton of a Kangaroo. The Gigantic Leaps of This Animal Are Made Possible Largely by Its Combination of Upright and All Fours Attitude—a Position Into Which Woman Sinks Naturally When Piloting an Aeroplane.

No. 3—The Skeleton of a Snake. The Reptile, Although It Originally Sprang from the Same Ancestor as the Bird, Has a Compactness of Skeletal Structure—Which Man Shares in a Lesser Degree—That Absolutely Forbids It from Flying.

No. 4—The Skeleton of a Bird. In Lightness of Frame and Structure It More Closely Resembles the Skeletal Formation of Women, Whose Specific Gravity, the Scientists Say, Is Less Than Man's.

No. 5—The Skeleton of a Man. The Bones Are Heavier and More Compact Than That of Woman. The Chest Is Larger, Showing the Need for More Air—a Matter of Importance in Rarefied Atmosphere.

No. 6—The Skeleton of a Woman. The Slight Differences Between It and That of the Man Gives Her an Enormous Advantage and Puts Her More on a Level with the Creatures That Fly Naturally.

Better Than Men for Flying Because They Are More Primitive, Not So Highly Strung, Feel Pain Less, See More, Have No Concentration, Sneeze Less Heavily and Are Closer to the Quadrupeds—Claims the French Government.

Making Its Foremost Woman Aviator a Chevalier to Encourage Others

Eight—That her sneeze is less violent. The perfect aviator, says the report, amplifying these points, needs not nerve, but comparative nervelessness. The possession of what is called "nerve" implies a psychological conflict in which courage is continually overcoming fear. The truly courageous man is he who fears something mightily, but who goes on and fights in spite of his fear. The man who "never knew what fear is" is not truly courageous, in the higher sense, because it does not require courage to fight something of which we are not afraid. The "higher courage" is positively detrimental to the aviator, the experimenters say, because the psychological conflict between "nerve" and fear uses up energy and keeps the aviator at a tension which does not allow the highest efficiency as a flier. Consequently, the type that makes the perfect aviator is the one that is nerveless, who has no conception of fear and faces the perils of the air courageously because he does not recognize that there are any perils.

Woman, it was found, has this quality to a surprising degree. She has it because she is still the primitive sex, has developed less than man, not only physiologically, but psychologically. Back in a far distant age man and woman were almost equally nerveless. But

man's activities caused him to acquire finer and more delicate nerves. He has steadily become more nervous and more sensitive to pain. This incapacitates him for the conquest of the air, while woman's lack in these respects fits her for it.

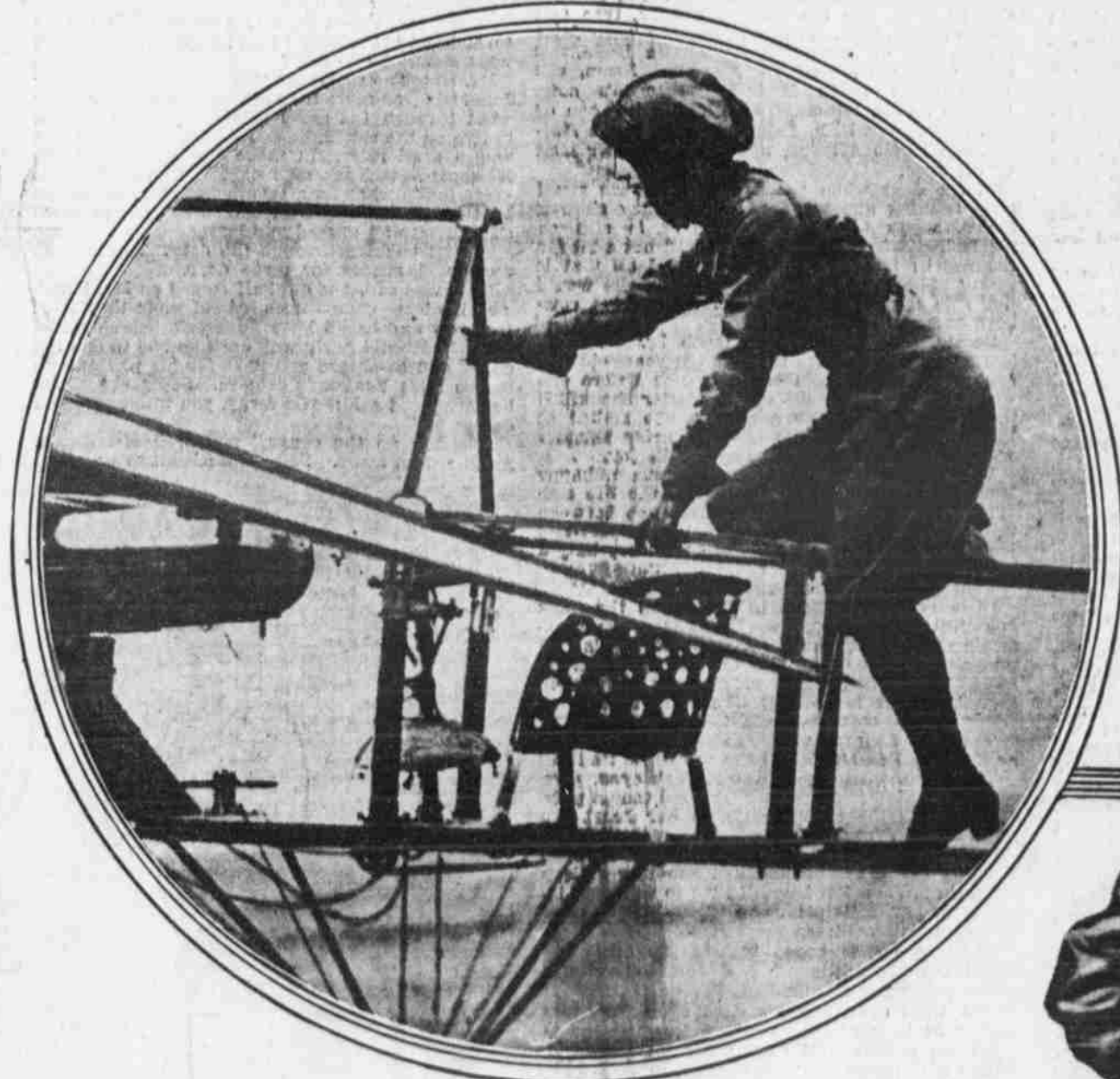
The comparative insensibility to pain is important because many an aviator has dropped to death because the stinging cold of the upper altitudes has caused him, momentarily, to lose control of his machine.

Again, in driving an aeroplane, the aviator's position, is more nearly quadrupedal than in any other form of locomotion. The aviator almost literally flies on all fours. He does this because he can attain the best balance in this position. Here the same primitiveness which gives woman the lead in nervelessness also comes to her aid. She is of structure more nearly the quadruped than is man. It is more natural and easier for her to drop on all fours and she can get about more freely in that posture than man can. Dr. Havelock Ellis makes the assertion that the realization that woman "is still anatomically a quadruped is the greatest surgical triumph of the nineteenth century." In this connection he defended woman's use of the corset, saying that it is needed to keep organs designed by nature for a horizontal position, in a vertical one.

Man having learned what woman has only imperfectly learned, to stand upright, needs no corset. This quadrupedal tendency, together with the fact that her bones are lighter and she has less specific gravity than man, aids her in flying, as it does in swimming. When timidity does not restrain them, women are much better swimmers than men. The field of woman's sight is larger than man's. The report states it thus: "The arc of a woman's vision is nearly twice that of man." In other words, while man, trained to concentrate his sight upon one object, sees with only a limited part, the centre, of the retina of his eye, woman, through centuries of side-glancing habits, of looking, so to speak, out of the tail of her eye, has kept the faculty of sight throughout the periphery of her retina. While looking straight ahead she can see what is happening at either side of her and for a short distance behind her. This power she shares with the savage and most of the lower animals—the rabbit and she being about equal in this respect.

The faculty is enormously valuable in the air. Graham-White, among others, has said that it is of the utmost importance to the aviator to be able to see every change in the skies above him and the land about him. Trees moving in a breeze far to the left may be a danger signal, which will mean disaster to the airman if not heeded. So of changes in clouds. The country under and the air about are filled with more signs to the perfect

A Photograph of the Late Harriet Quimby, the Queen of American Flying Women and One of the Very Few Women to Lose Their Lives in Aviation. She is Shown Climbing Into Her Aeroplane.



airship pilot than the breast of the Mississippi is to the steamboat pilot—and Mark Twain has told of their complexities. The peripheral sensitiveness of woman enables her to see these signs where man's concentrated sight misses them.

In the same way what the late great psychologist, William James, called her, "dispersed attention," helps her. Man's advancement has developed in him a tremendous power of concentration. This his primitive spouse, or sister, lacks. Man concentrates his attention. Woman scatters hers. Man thinks of one thing at a time. Woman

Why HOME-LOVING Woman Is the Best Air Woman

By Dr. A. Monae Lesser.
(Former Chief Surgeon of the Red Cross of America.)

THERE is truth in the contention that woman—because of her primitive qualities—may yet rule the air. But the type of woman who will do so is the quiet, stay-at-home woman—the housekeeper, housewife and mother.

That it should be she, the woman of the hearth, instead of the woman of public action, is capable of scientific proof. Since the dim ages of the world, when men and women were of equal primitiveness, man has developed far, and a penalty of his mighty concentration has been an acute tension of the nervous system and a corresponding sensitiveness to pain.

If men were called upon to bear the pain that is visited upon women, especially in maternity, they would suffer doubly, and many of them would die. Even lesser pains ordinarily borne by women would send them running about the house screaming. They could not endure what women bear because women have a greater capacity for

trying to think of many things at the same moment and succeeds. The span of consciousness is wider in woman even if it is shallower.

Consuming less oxygen than man—she is a shallower breather—she is less affected by the thin air of high altitudes.

For these and other reasons cited in the remarkable statement by the distinguished New York physician, Dr. A. Monae Lesser, former chief surgeon of the Red Cross in the United States, and leader of the Red Cross forces in Cuba during the war with Spain, the French Army Department has determined to recruit as many women as possible in its

suffering. All this is due to their greater nerve tension, which has come with their greater advance from primitiveness.

The greater nerve tension has produced a different kind of nerves. Scattered through the membranes of their bodies are nerves of a finer, more delicate order. Men sneeze more violently than women because in the membrane lining of the nose are a finer grade of nerves, more delicate, more sensitive to intruding dust or to changes of temperature.

The woman who has developed along lines of domesticity has little or no such nervous sensitiveness. Her sensibilities are coarser, because they have never been developed to the knife-like edge of man's. It is not, according to some aeronauts—Claude Graham White, I believe among them—not nerve, but lack of nervousness, that makes great aeronauts. Nervousness during an ascent is fatal. That state which we term "nervelessness," the absence of finely attuned nerves, is better than courage in an emergency.

Imperturbability is a safeguard, and the woman of low order of nervousness is imperturbable.

One type of woman should be barred from the air, and she, unfortunately, is the kind

flying corps. A special law will have to be passed making them eligible to army service.

The French are the most gallant of nations. But they repudiate the suggestion that they are crowning women queens of the air to make up for the slight put upon them by art, which never carved or painted a woman angel. Their course is a sternly practical one, they say, and Mlle. Dutrieu's elevation to the ranks of a Chevalier is only part of a practical campaign.

Dr. Lesser's statement follows:

that would rush into it. That is the woman who is the opposite of the primitive—the advanced woman.

In the last hundred years a minority of women has developed enormously in mental faculty, and in the acuteness of nervous organization that accompanies a high order of mentality.

This minority of their sex has developed with men, equally with them, and their nerves have attenuated to the fineness I have described. These are sterile women, women who are childless, and who have developed almost abnormally their minds. Such as these, laboring under all the disabilities of men by the fineness of their nervous organism, should never be permitted to make an ascent.

Take a woman from the nursery, from the ironing table or from beside the kitchen range, but not a woman from the desk or studio, to make the conquest of the air!

In such a woman as I first described the primitive qualities have remained—the "peripheral visual attention" which William James cites, the "dispersed attention," the lack of necessity of the violent sneeze. The other sort is too highly developed, too manlike, too highly strung for successful aerial feats.

Mlle. Dutrieu, the Daring French Woman Aviator, Who Has Been Made a Chevalier of the Legion of Honor by the French Government.

M LLE. HELENE DUTRIEU, the "Hawk Girl of France," has just been made a Chevalier of the Legion of Honor as a reward for her skill as an aviator. Mlle. Dutrieu is one of few women to receive this decoration.

France has given it to her because the Bureau of War has become convinced that women make better aviators than men, and so, in its struggle to perfect its aeroplane service, wishes to encourage women to enter that field of action!

The great ambition of the French is to keep far ahead of all other nations in aviation. The belief that the victories of the future will belong to those who are strongest in the air has become firmly ingrained in the national mind. Therefore, France is spending more than any other nation on this branch of service and is making extended and varied researches into the problems and possibilities of aviation. In the course of these experiments, not long ago, a series of tests were made to determine the effects of altitude and speed on the human body and to test the reactions under the conditions of flying. Both men and women were used in the experiments, and when the results were tallied it was found that the woman had far outstripped the men on all points!

Other experiments were made and the experts in charge, as a result, have come to the surprising conclusion that woman make so much better aeroplane drivers than do men that in the future she will literally rule the air. The report of the scientists to the War Department, as cabled from Paris, gives eight controlling factors for this supremacy: First—Because woman is more primitive than man. Second—Her nerves are not so delicate, and so she is less nervous. Third—She feels pain less than man does. Fourth—She needs less oxygen in her breathing. Fifth—The arc of her sight is nearly double that of man. Sixth—She has the faculty of "diffused attention," which man ordinarily lacks. Seventh—That her specific gravity is less than man's and that the slight differences in her skeletal structure give her an enormous advantage in the air over her heavier, more compact mate.



Mrs. Gavin, an English Woman Aviator to Whom England Will Give Victoria Cross.