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Females Are Tougher than Males

In gulls, too

Are men really tougher than women? Girls learn to read before boys do, get better marks in college, and even their brain contains more gray matter. Come to think of it, as early as in fetal state, males are medically weaker than females. The sex ratio at birth is slightly in favor of the boys. But in the womb, boys are more vulnerable to maternal stress and the male fetus is more predisposed to premature birth, congenital malformations and cerebral paralysis. After birth, boys are four times more likely to experience disorders of development and learning (autism, stuttering, dyslexia), ten times more likely to develop some type of attention condition with hyperactivity.

The animal world is no different from our own, as showed by a new study carried out by Maria Bogdanova and Ruedi Nager from the University of Glasgow, and published in the Behavioral Ecology and Sociobiology journal. Male seagulls were found to be more vulnerable to their environment during embryonic development when compared to females. In many bird species, siblings hatch in an echeloned manner, and that's why chicks in a brood can have different ages, the younger ones being often outcompeted and displaying decreased survival ability.

Birds have a well-developed auditory system during the last stage of incubation and embryos communicate with each other via sounds. These calls seem to be a signal for later-developing embryos about forthcoming brood competition; they can even react to them by speeding up their hatching time to diminish their age odds.

In this new research, the social environment of herring gull embryos was manipulated to see how sibling contact during embryonic stage impacted the developmental rate in males and females. The researchers took the last-laid eggs (gulls lay 3 eggs) and incubated them either alone or together with other eggs (receiving information about the presence of older embryos). The hatchlings were raised together with nest mates or alone. These situations impacted hatching duration and fledging (when the young have feathers developed enough for flight) condition.

Male eggs incubated in isolation hatched more rapidly than females but both genders had equal, relatively good condition by the time of fledging. Oppositely, in common clutches, males hatched more slowly and fledged in much poorer conditions when compared to females, no matter if cared singly or in a brood. It seems that females have a better resistance to the challenges of echeloned hatching.