



# BLUMENBACH LECTURE

LECTURE SERIES OF THE  
JOHANN-FRIEDRICH-BLUMENBACH-INSTITUTE  
FOR ZOOLOGY AND ANTHROPOLOGY

## THE MECHANISMS OF WEIGHT REGULATION IN HUMANS AND OTHER ANIMALS: FROM INSURANCE TO OBESITY.

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Individuals must consume enough food to avoid starvation, but not so much as to cause them other problems. This is a difficult balancing act, since the food supply in most ecologies is somewhat unpredictable. As a result, animals have evolved 'insurance' strategies such as foraging for information, and storing fat. The activation of these strategies leads to some counterintuitive patterns. For example, in birds, it is the individuals with the least access to food who are the fattest. Interestingly, this is true in certain human societies too. I review our recent work on weight regulation in starlings, where we find that both the bird's current environment and developmental experience modulate its food motivation and fat storage. I then examine what we know about human fatness from a similar perspective. Rather than seeing excess body weight as just 'individuals making bad decisions', there is some value in trying to understand it in terms of evolved strategies interacting with particular developmental and ecological circumstances.

SEMINAR ROOM  
ERNST-CASPARI-HAUS (GZMB)  
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HOST  
DEPT. BEHAVIORAL ECOLOGY  
DEPT. COGNITIVE ETHOLOGY

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