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## Out of sight but not out of mind

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**Propositions accompanying the thesis**  
**“Out of sight but not out of mind: the role of the embryo in hormone-mediated maternal effects”**

1. In oviparous species, mothers are always thought to have the upper hand in deciding the developmental trajectories of her embryos. Yet the fact that embryos are capable of modifying the maternal hormone environment they are exposed to, requires us to further investigate the role of the embryos in shaping their own development. (Chapter 1)
2. In birds, the potent effects induced by maternal (yolk) androgens and the rapid embryonic metabolism of these androgens seemingly results in a paradoxical issue. Possible explanations include a process where the metabolites in the form of conjugated hormones are being converted back to free androgens inside embryonic tissue and that other metabolites directly act on target tissues. (Chapter 2)
3. Understanding the prenatal effects of maternal androgens is important (Chapter 3), as prenatal development could largely shape and subsequently affect the post-natal development of the offspring, facilitating early adaptations to a changing world.
4. Embryonic metabolism of maternal androgens can be context-dependent. In the case of rock pigeon *Columba livia* embryos, both initial maternal androgens levels the embryos are exposed to and the position of embryos in the egg laying sequence affect the metabolism of maternal androgens. (Chapter 4)
5. Embryos play an important role in mediating pleiotropic effects of maternal androgens, which opens a possibility for mother-offspring conflict and offspring-offspring conflict. (Chapter 5)
6. “To learn without thinking is blindness, to think without learning is idleness” – <The Analects>
7. Don’t lose your sense of life, beauty and poetry because you have been immersed in science for a long time.
8. Doing a PhD is like writing a book, which, quote from George Orwell, “is a horrible, exhausting struggle, like a long bout with some painful illness. One would never undertake such a thing if one were not driven on by some demon whom one can neither resist nor understand.”.

**Yuqi Wang**