

Comments and Study questions for Dugatkin. Chapter 17. Animal Personalities
Ethology and Behavioral Ecology
Spring 2007

General comments on this chapter: It is fair to try to extend science to places where it has not been in the past and it is especially important to many to do so when we consider important human attributes. This chapter is written in that vein – where did what we call personality come from and stripped to its basics, what is it? I want you to notice some of the methods used and in particular some of the problems. Also notice that we are working on the cusp of what we can observe and what might normally require some introspection of might be opened to anthropomorphism. Keep these things in mind as you read what I hope you will find to be a fascinating, and sometimes speculative, chapter.

1. What is a personality difference?
2. Look over the producer/consumer game at the start of chapter and get a good understanding of it. The graph is especially informative. Notice that it predicts that there should be some ideal mix of "producers" and "consumers" where neither strategy or personality does any better than the other – while on the other hand, if we get too many of say, consumers, then producers do better on the average and so we return to the equilibrium point. This point defines something called a mixed evolutionarily stable strategy (ESS). Besides being important in this chapter we will consider this sort of game in great detail a bit later in the course. Let this serve as your introduction to game theory.
3. The pumpkinseed sunfish example is interesting and you should know it and its details. Notice that what is especially interesting is that the so-called personality types of fish did not persist in the lab implying that at least in some circumstances, personality is a dynamic trait.
4. Why should female guppies prefer risk-taking (bold) males? We will talk about this later when we consider sexual selection and communication. For the moment, know the example and consider whether or not boldness is likely a fixed trait or whether it might depend on the condition of the individual (e.g., better condition, more likely to be bold). What does this say about personality, if you in fact consider boldness to be a personality trait?
5. Why does "generally good agreement between major personality traits across hyenas, and non-human primates suggest some cross-species commonalities with respect to personality"? I am not necessarily disagreeing with this statement but please think about it in terms of biases or lack of biases – is this a good methodology or might there be better ways to do this (and if so, what)?
6. The satellite/independent territory holder "personalities in ruffs is very interesting and should be studied carefully. Do you think these are personalities? Game theorists (Dugatkin is one) might simply classify them as strategies – complexes of behavior

designed to meet some fitness goal. Could a strategy be a personality (think about this and the other examples in the chapter)? What do you think a personality is and are you satisfied with the definition that Dugatkin presents at the start of the chapter and glossary? Finally, note the very interesting and probably very unusual genetics of this trait in ruffs. Does it surprise you that satellite is a dominant trait? Explain.

7. Comment – in the tit example, tutors are not the teachers we talked about in social learning. What type of social learning are the slow birds appearing to do?

8. Does it surprise you that chimpanzee personality is culture-dependent? Is it so with humans or are personalities submerged or brought out? This is the old nature-nurture question yet again. The end of the section on guide dogs may help you answer this question (p594).

9. How does coping style differ from and how is it related to personality difference?