Dynamics and observational signatures from multi-field inflation

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Propositions

1. Inflation has become part of the standard cosmological model because it provides a mechanism for structure formation that happens on a homogeneous and isotropic background. (chapter 2)

2. Even though significant progress has been made in the phenomenology of inflation, we are still away from a successful high-energy embedding of the inflationary paradigm. (chapters 3 and 4)

3. The two-field generalization of the α-attractor model may cease to be a viable model for certain regions of the parameter space. (chapter 5)

4. Scaling solutions can be used as toy models to investigate stability properties of more complicated models. (chapter 6)

5. The stability criteria of background solutions can be different than those of linear perturbations. (chapters 6 and 7)

6. To find the regions where orthogonal fields can be stabilized one has to consider the minima of an effective potential constructed from the potential gradient and the centrifugal forces. (chapter 7)

7. Multi-field inflation is inherently non-predictive. The many-field limit does not alter this statement. (chapter 8)

8. In the inflationary literature *multi-* almost always refers to the two-field case. Anything more interpolates from *multi-* to *many-* and it is usually left for future work. (inflationary community)

9. The *obsolete paper machine conjecture* states that the bulk of papers satisfying the POP (publish or perish) condition belong to the swampland of science. (academia)