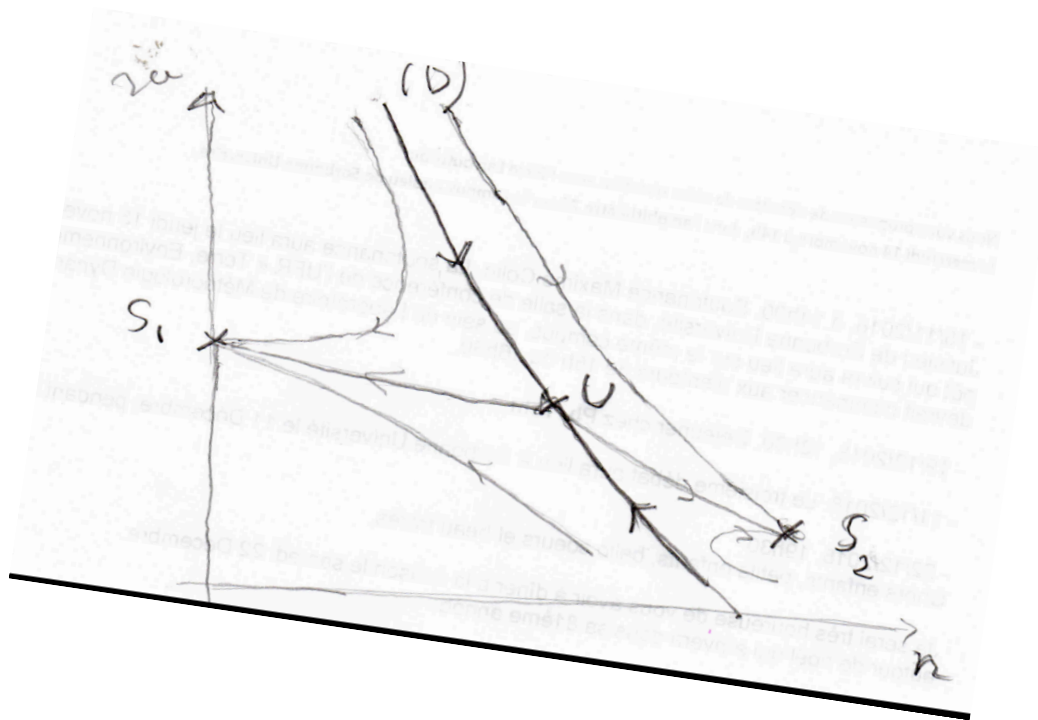


Further to the comments by the three referees, I add below a few comments as Editor.

1. Concerning the ‘dynamical system’ aspects of the paper, the qualitative behaviour of the two-dimensional system (3) can easily be inferred from visual inspection of its phase portrait in the  $(n, w)$ -plane. I give below a rough sketch of that phase portrait. The stable equilibrium points are  $S_1$  (desert) and  $S_2$  (grassland), the unstable point is  $U$ . Each of the two stable points attracts all orbits in its vicinity. The stable manifold of  $U$ , denoted  $(D)$ , separates the two corresponding attractive basins.



It is clear that any perturbation of, say  $S_1$ , that takes the perturbed point to the other side of the separatrix  $(D)$  will lead to convergence to  $S_2$ , and to ‘nonlinear instability’. The perturbations that result in nonlinear instabilities are those that cross the separatrix. This can be seen immediately, and much more clearly than by resorting to the CNOP technique and the associated optimisation process. The CNOP technique can, at most, help in quantifying the instability.

2. In any case, in the line of comments made by both referees 1 and 2, limiting the study to spatially uniform perturbations, and therefore to two-dimensional dynamical system, is very restrictive. The study would gain in interest in restoring the spatial derivatives in system (1) and allowing for spatially varying perturbations.

In addition, the paper is poorly written and inconsistent in several respects. It obviously includes parts of another paper, which are here irrelevant.

3. Linear Singular Vectors (LSV) are mentioned, and given a magnitude (l. 269 and Table 2), but not defined. If they are really ‘linear’, they are only directions, and cannot have a magnitude.

4. It is written (ll. 289-290) that the *Lyapunov method* has been employed to explore the stability of system (3). No such method is discussed in the paper. Indeed, any use of Lyapunov exponents or vectors would be devoid of interest in the case of system (3), for which all orbits converge to an equilibrium point.

5. Figure 3 and Table 2 do not seem to be discussed, nor even referred to, in the text.