



FIG. 2: Final absorbing state in the Axelrod model with social influence as a function of  $q$  for different values of  $\epsilon$ . In dots-symbol line is the fraction of the biggest culture while in dotted line is the fraction of Mass Media information on the society (only in panel a)). The parameter  $A$  is the area of the system ( $A = L^2$ ). a) Calculation done including one-step neighbors (von Neumann neighborhood). b) Calculation done including two-step neighbors. The calculation is done with  $F = 3$ ,  $L = 50$  and averages are taken over 200 different random initial conditions.

values of  $\epsilon$  induce a stronger multicultural final state given by higher values of  $\langle S \rangle$ . To explain this result, we note that higher values of  $q$  mean there are initially a higher degree of cultural diversity on the society and this is reflected in sets of influence  $I$  with low number of neighbors, i.e., each set of influence  $I_i$  will be frequently composed by the own agent  $i$  and by the super-agent  $s$ , and with low probability by the neighbors since they probably do not share any of their trait values with agent  $i$ . The probability of the super-agent to be included in the set of influence  $I$  increases for increasing value of  $\epsilon$ . For higher  $q$  values, in