COLLECTIVE EFFECTS OF PUBLIC OPINION FORMATION WITHIN ISING-VAYDLIH MODEL

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In this work the mathematical model of public idea forming within the framework of Ising-Vaydlih model has been constructed. An analogy with Ising-Vaydlih model is caused by that parameter of order in this model, that is z - the component of spin variable, takes on two possible values depending on direction of spin (+1 - yes, or -1 -no). Except it, in the model, of public opinion forming a collective parameter that acts part thermal energy in a physical model is set. The external fields act as part of parties influence. Within the limits of the mentioned above Ising-Vaydlih model the degree of public determination of collective opinions in relation to that or other issues taking into account external parties influence or mass medias on the formation of public idea is investigated. It is shown, that in the case when external influence of party or mass media supports the minority opinion, a relative number of people who had the opposite opinion under the act of external disturbance monotony grows and at the defined critical value of external action ($\geq 10\%$) abruptly grows and public opinion will reorientation on the opposite one. Such phenomenon is observed when a sum of the internal hidden political position parameter of individual and parameter of public opinion pressure is anymore after 1.

Keywords – Ising-Vaydlih model, public determination degree of collective opinions (order parameter), the hidden political parameter of individual position, public opinion pressure parameter, internal advantage influence parameter, political parties and the media influence on public opinion.