The possibility of morally enhancing the behavior of individuals by means of drugs and genetic engineering has been the object of intense empirical research over the last years. Although moral enhancement may turn out to become useful to promote cooperation in some areas of human interaction, it will not promote cooperation in the domain of international relations in areas which are critical to state security. Unlike some moral enhancement theorists, I argue that, due to the structure of the system of states, moral enhancement cannot be used to avert some major threats to humankind in the future such as terrorism and nuclear conflict. My analysis of the political implications of moral enhancement is pursued through a critical discussion of two different versions of political realism, to wit human nature realism and structural realism. I conclude that, as far as major threats to the survival of humankind are concerned, moral enhancement can at most be used as a means to change the present structure of the system of states.