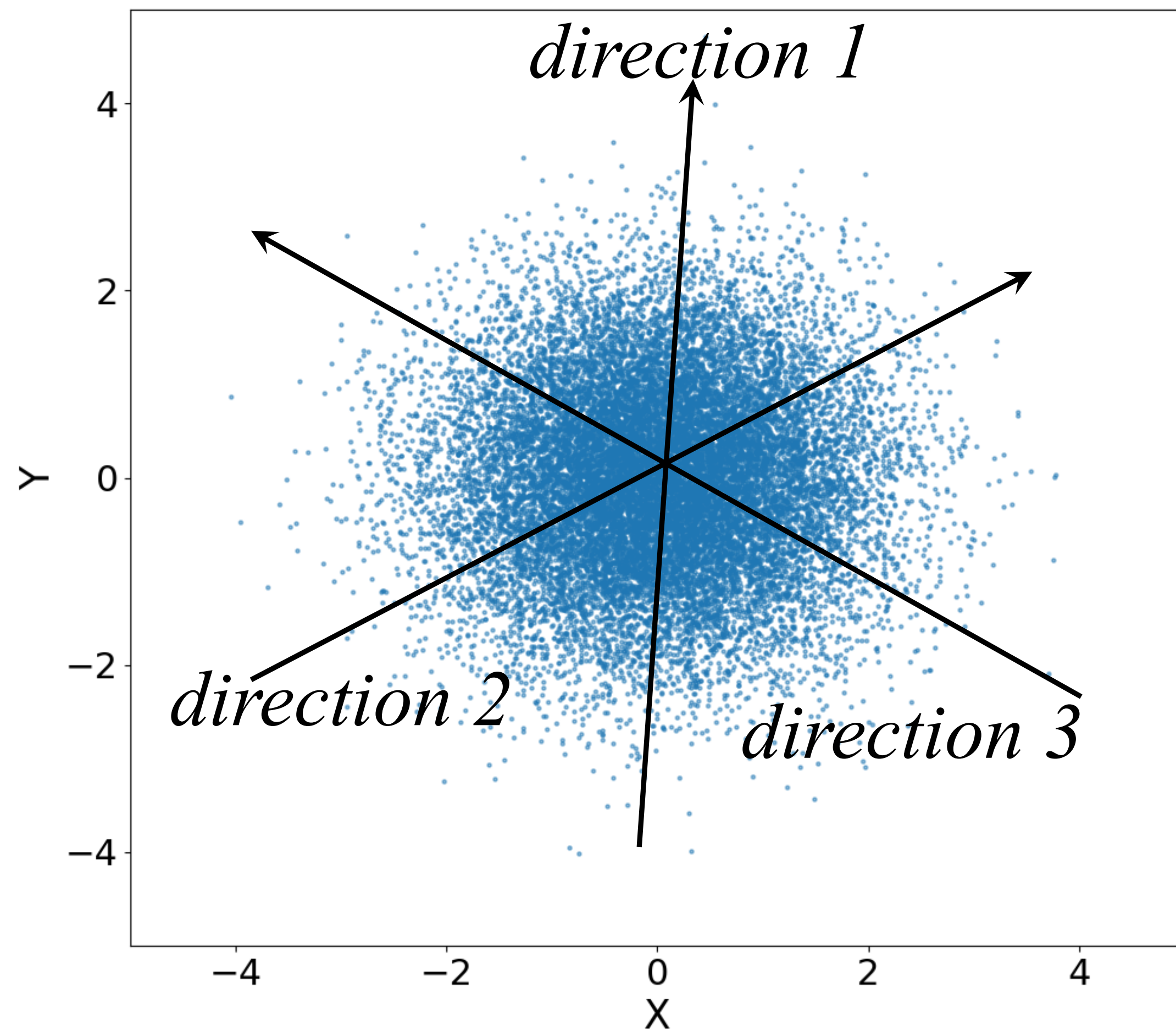
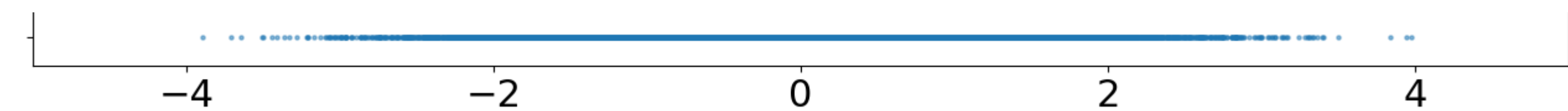


The representations obey (approximately) the same distribution along any space direction:

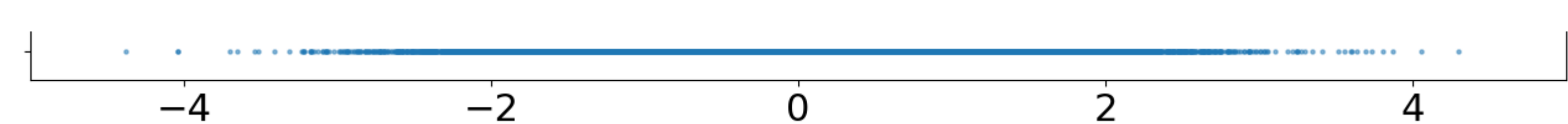


The projections along various directions:

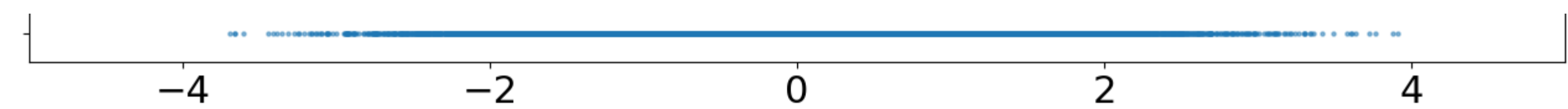
*projection 1*



*projection 2*



*projection 3*



The purpose of optimizing our isotropic constraints is to encourage that the representations **exhibit the same distribution along any direction in space**. According to Property 1, in this scenario, the eigenvalues of the covariance matrix will **all be equal**. Based on the proof process of Proposition 3, in such a case, the Gaussian entropy will **reach its maximum value**. Since entropy represents the amount of information, it indicates that our isotropic constraints can increase the information content of the representations and enhance their diversity.