OPINION

An illness by any other name

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Earlier this week, at a staff meeting at the foundation, we were talking, as we often do, about the relationship between genes and autism, and the tenuous, ill-understood connections between the two.

We?re a diverse bunch here, with diverse educational backgrounds ? spanning all the way from director **Gerry Fischbach** to admin staff who have little training in science ? and, of course, the most intriguing questions often come from the latter.

Wednesday was no different. We suddenly found ourselves getting deep into the relationship between psychiatric diseases and genetics. When we know more about the genetics, one staffer asked, will there be one gene that can explain all autism's symptoms? Will there even be such a thing called autism?

Judging by where the field is heading, maybe not.

As an article in *Nature* explained earlier this month, it?s increasingly clear that illnesses such as schizophrenia, depression, bipolar disorder, autism etc are in fact a continuum of brain-related disorders that have been given arbitrary definitions, for lack of better information.

In fact, there are probably a few hundred risk genes, and which illness manifests itself may depend on which combination of genes someone inherits. Scientists are finding, for example, that **autism and schizophrenia are intricately linked**.

That makes it difficult, to say the least, to find risk genes for any one disease. One group of researchers is arguing that scientists should instead focus on what are called ‘intermediate phenotypes', which fall between the genes and the eventual behavior clinicians rely on to make a diagnosis.

These phenotypes, which could include the structure and function of different brain regions, are quantifiable ? and so, more reliable ? than behavior.

It's entirely possible that at some point, people will no longer be diagnosed with schizophrenia or autism, but instead with their very own specific, constellation of abnormalities.