I don’t think chemical properties are more suitable than surface properties when it comes to determining the meaning of a natural kind term. Language is used to communicate and the meaning of a term is part of the message that the speaker tries to get through to their listener. In this sense, language and meanings exist far before the discovery and naming of chemical elements or compounds. If the speaker and the listener are in the same psychological state, then at least they believe they are referring to the same class of things, in most cases, this is enough to get the message through. When language is use to communicate, speakers usually base their understanding and interpretation of the conversation on their common knowledge, and since most people can never be familiar with all the scientific definitions in every possible field, stereotypes are clearly used more widely than the “meanings” in semantic externalism. In the case of twin-earth thought, the problem is that the guy and his “twin” think they are referring to the same thing, they are in the same psychological context, while the “water” they refer to have different chemical nature on earth and twin earth. But if the psychological context is really that “the same”, that is to say, they are both talking about a transparent liquid with no smell and no taste, supports the life of animals and plants, can be used to drink and wash things, then isn’t the conversation successful despite the different chemical properties? Did they not get the message through, or did they fail to understand each other? It doesn’t matter that XYZ water is not H2O water, as one may refer to a “whale” without knowing it is a mammal rather than a fish, or talk about an “ostrich” for not being able to tell it is actually an emu, as long as the speaker and the listener both have an image of a giant fishlike sea creature or a big bird with long legs, long neck and runs very fast, the conversation goes on. Besides, science is always evolving, and human always become closer and closer to the truth of nature and all its creations. Looking back at our ancestors with all the advanced science “common knowledge” that we have today, we may find many of the words they use have the “wrong” meanings, since their recognition of the world and classification of things are far rougher and more elementary than today. One may write “the giant fish” but refers to a whale, and can we say he/she is wrong? This “mammal that looks like fish” is different from the fish fish, the same way “XYZ water that bares a lot of similarities with water” is different from the water water, this is not a problem. Language evolves and advances with the accumulation of knowledge through human history, like when a new animal species is discovered, or the animals that are used to thought belong to the same specie actually belong to two separate ones. In the twin’s case, they may also treat the difference between H2O and XYZ as a new knowledge, and use it as a source to add new words/phrases to their dictionary, thus eliminating the ambiguity.