For more than two decades ago mathematician Barbara Shipman made rather surprising finding while working with her thesis. The 2-D projections of certain curves in flag manifold $F=SU(3)/U(1)\times U(1)$ defined by the so called momentum map look like the waggle part of the dance of the honey bee. Shipman found that one could reproduce in this framework both waggle dance and circle dance (special case of waggle dance) and the transition between these occurring as the distance of the food source from the nest reduces below some critical distance. Shipman introduced a parameter, which she called α, and found that the variation of α allows to integrate various forms of the honeybee dance to a bigger picture. Since $SU(3)$ is the gauge group of color interactions, this unexpected finding led Shipman to as whether there might be a profound connection between quantum physics at quark level and macroscopic physics at the level of honeybee dance.

The average colleague of course regards this kind of proposal as crackpottery: the argument is that there simply cannot be any interaction between degrees of freedom in so vastly different length scales. Personally I however found this finding fascinating and wrote about the interpretation of this finding in the framework of TGD and TGD inspired consciousness. During more than two decades a lot of progress has taken place in TGD, in particular I have learned that the flag manifold F has interpretation as twistor space of CP_2 and plays a fundamental role in twistor lift of TGD. Hence it is interesting to look what this could allow to say about honeybee dance.

It turned out that one could understand the waggle parts of the honeybee dance at space-time level in terms of the intersection of the space-time surface with the image of the Cartan sub-algebra of SU(3) represented in CP_2 using exponential map. This allows to code the positional data about the food source. The frequencies assignable to the wing vibrations and waggling turn could have interpretation as cyclotron frequencies as expected if the magnetic body of the bee controls the waggle dance utilizing resonance mechanism. They could also correspond to the momenta (frequencies) defining constants of motion for geodesic in $U(1)\times U(1)$ defining one particular point of flag manifold F. Also a connection with the Chladni effect emerges: the waggle motion is along time-like curve at which K\"ahler force vanishes. Also the transition from waggle dance do circle dance involving also a short waggle period can be understood.