Information density as a factor for embedding?

It is not clear, how the (more computational) concept of information density relates to the (more linguistic) concept of information structure. It is well known that information structure plays a role in determining what variant of a given syntagma is realized, if there is variation. A well-studied case is varying embedding depth of subordinate clauses: clauses, that contain foregrounded / new etc. information tend to be less deeply embedded. If information density bears a relation to that, we would expect the information density to be high in less deeply embedded clauses. In order to test this, a corpus of German scientific writing, ranging from the 18th to the 21th century, is investigated both for the influence of information structure on embedding variants, and for the information density of such passages; the results of both studies are then brought into relation to each other. Although the project is still under way, we will present first results.