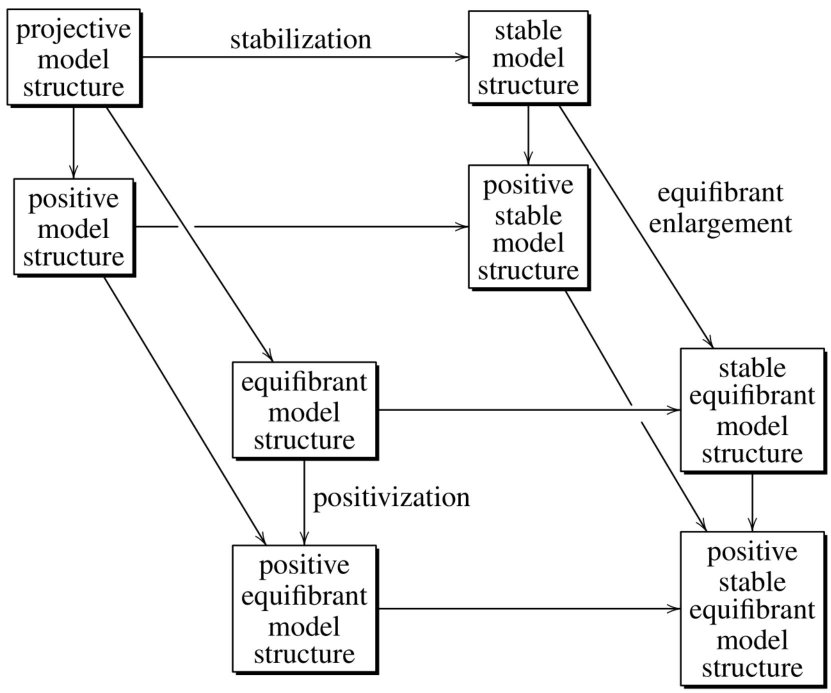
Finally we have **equifibrant enlargement** in the case of orthogonal G-spectra. We will discuss it in §9.3 below.

These three modifications (stabilization, positivization and equifibrant enlargement) can be done independently of each other in any combination in the categories where they are applicable, and the commute with each other. They are indicated below by horizontal, vertical and diagonal arrows respectively. Thus we get two model structures (projective and stable) on the original category of spectra, four on symmetric and orthogonal spectra (those of Definition 8.4.35 below) and eight on orthogonal G-spectra, which are shown in the following diagram.

(8.0.2)



Each of these model structures is cofibrantly generated and we identify its generating sets in Theorem 9.3.9 below. **The model structure we will use in subsequent chapters is the positive stable equifibrant one on the bottom right**.

In the original case, X is called an **Ω-spectrum** if the map η_n^X is a weak equivalence for all n. Hovey's generalization is the notion of a Ψ-spectrum (which he calls a U-spectrum) in Definition 8.1.1. In the original category of spectra, which we denote here by $\mathcal{S}p$ (and by $\mathcal{S}p^{\mathbf{N}}(\mathcal{T},\Sigma)$ in Definition 8.1.1), two notions of weak equivalence are studied in [BF78]:

(i) A map $f : X \to Y$ is a **strict equivalence** if $f_n : X_n \to Y_n$ is a weak equivalence for each n. In the corresponding model structure, all spectra are fibrant.