The task-based approach to labor markets emphasizes the conceptual difference of work activities (tasks) from the set of productive worker capabilities (skills), and the practical importance of occupations as the unit of empirical analysis. The resulting focus on occupations revealed an important and well-documented aspect of labor market inequalities that the canonical skill-biased technical change (SBTC) model could not predict, namely labor market polarization referring to slower growth in employment and wages in middle-wage jobs relative to others located at the tails of the wage distribution (e.g., Autor et. al., 2006, 2008; Goos and Manning, 2007). The literature often interprets polarization in terms of skills, as the manifestation of non-monotonic changes in the demand for skills as opposed to the monotonicity implied by the canonical model.

Untangling tasks from skills has proved itself as an empirically remarkable improvement over the canonical model, however both approaches still share a common assumption that strictly isolates skill-types in the performance of a given task. In other words, a task can only be performed by a single skill type, either absolutely (as in the canonical model) or conditional on the state of technology (as in task-based models). However, in the data, substantial differences in observed skills exist even within narrowly defined occupation categories. Moreover, the connection between observed skill and wage structure of occupations do not seem to hold similarly across occupations. The aim of this paper is to relax this assumption and explore the role of occupational skill heterogeneity by providing a characterization of the evolution of inequalities with respect to differences in observable skill intensities across tasks in the US labor market since 1980.

I document that employment share change and wage growth of occupations tend to increase monotonically with various measures of skill intensity since 1980 in the US, in contrast to the existing interpretation of labor market polarization along occupational wages. The observation is not particularly driven by a specific decade, gender, age group, or occupation classification. The evidence suggests that polarization by wages does not imply polarization of skills that have cross-occupation comparability. Skill-biased and polarizing occupation demand changes coexist as a result of the weak

connection between wage and observable skill structure particularly among the low-wage jobs in the 1980s. On the other hand, occupation-specific worker conditions such as how demanding a job is in terms of time, cognitive processing capacity, and exposure to hazardous conditions seem to predict occupational wages better than skills and tasks.

The documented empirical facts can be reconciled in an extended version of the canonical skill-biased technical change model which incorporates many occupations and within-occupation heterogeneity of skill types. In the model SBTC changes both the skill premium and the equilibrium reallocation of employment across occupations, and hence the occupation wage growth. Moreover, if occupation-specific disamenities for those at the bottom of skill structure are high enough the SBTC in the model also predicts occupational polarization along the wage structure.