

Definition (Partial order \leq_V on valuations). For two valuations $v_1, v_2 : \mathcal{A} \rightarrow \mathbf{UDP}$, say that $v_1 \leq_V v_2$ if $v_1(a) \leq_{\mathbf{UDP}} v_2(a)$ for all $a \in \mathcal{A}$.