1. The category $\mathbb{C}$ has a final object $\mathbf{1}$ and F preserves a limit $(Z, (\gamma_i : Z \to F^i\mathbf{1})_{i\in\omega})$ of the final sequence $\mathbf{1} \leftarrow F\mathbf{1} \leftarrow F^2\mathbf{1} \leftarrow \ldots$. (This limit yields a final F-coalgebra $\zeta : Z \to FZ$.)

2. The Kleisli category $\mathcal{K}\ell(T)$ is **Dcpo**-enriched. That is, for each pair of objects X and Y in $\mathcal{K}\ell(T)$, the homset $\mathcal{K}\ell(T)(X, Y)$ carries an order $\sqsubseteq$ and each directed subset of $\mathcal{K}\ell(T)(X, Y)$ has its infimum.

3. For each object $X \in \mathbb{C}$, the lifting $J(!_X)$ of the unique arrow to the final object is the largest element in $\mathcal{K}\ell(T)(X, \mathbf{1})$.

4. There exists a distributive law $\lambda : FT \Rightarrow TF$, and hence F can be lifted to an endofunctor $\overline{F}$ on $\mathcal{K}\ell(T)$.

5. The functor $\overline{F}$ is monotone.

6. The functor J lifts the limit in 1. to a weak 2-limit. Namely, for any cone $(X, (\pi_i : X \nrightarrow F^i\mathbf{1})_{i\in\omega})$ over the sequence $\mathbf{1} \nleftarrow \overline{F}\mathbf{1} \nleftarrow \overline{F}^2\mathbf{1} \nleftarrow \ldots$, there exists the *largest mediating arrow* $b_{\mathbf{max}} : X \nrightarrow Z$ that satisfies the following conditions.

   - The arrow $b_{\mathbf{max}}$ is a mediating arrow (i.e. for each $i \in \omega$, $\pi_i = J\gamma_i \odot b_{\mathbf{max}}$).
   - If $b : X \nrightarrow Z$ satisfies $J\gamma_i \odot b \sqsubseteq J\gamma_i \odot b_{\mathbf{max}}$ for each $i \in \omega$, then $b \sqsubseteq b_{\mathbf{max}}$ holds.