- $W \to \mathbf{X} \to \mathbf{Y} \to \hat{W}$ can be established like the discrete case.

- W, $\hat{W}$ – discrete

- $\mathbf{X}$ – real but discrete

- $\mathbf{Y}$ – real and continuous

- $\mathbf{Y}$ needs to be handled with caution because it is continuous.

- In particular, the existence of the conditional pdf $f(\mathbf{y}|\hat{w})$ needs to be established so that $I(\mathbf{X}; \mathbf{Y}|\hat{W})$ can be defined.

- Refer to the textbook for the technical details.