## **Definition** (Codiagonal function). Define the codiagonal function codiag<sub>p</sub>: P +

 $P \rightarrow P$ :  $\operatorname{codiag}_{P}: P + P \to P$ ,

 $\langle 1, p \rangle \mapsto p$ 

 $\langle 2, p \rangle \mapsto p$ .