There is a mistake or typo in Example 2.1, Page 132. The values of $g_2^\varepsilon(u)$ and $g_2^\varepsilon(v)$ should be the same as $g_1^\varepsilon(u)$ and $g_1^\varepsilon(v)$ if $\varepsilon > 0$ (since it is a unichain case). Luckily, it does not have any effect on the conclusion. The correct expression for $g^\varepsilon(u)$ and $g^\varepsilon(v)$ is:

$$g^\varepsilon(u) = \begin{cases} \begin{bmatrix} 1 \\ 0 \end{bmatrix} & \varepsilon = 0 \\ \begin{bmatrix} 1 \\ 1 \end{bmatrix} & \varepsilon > 0 \end{cases} \quad \text{and} \quad g^\varepsilon(v) = \begin{cases} \begin{bmatrix} 1.5 \\ 0 \end{bmatrix} & \varepsilon = 0 \\ \begin{bmatrix} 0.75 \\ 0.75 \end{bmatrix} & \varepsilon > 0 \end{cases}$$