

Examples of extensive games drawn with `egameps.sty`

by

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October 1997. Revised 2010-11-7.

1. Introduction

`egameps.sty` is \LaTeX 2 ϵ style file for drawing extensive games. The latest version is available at <http://www.economics.utoronto.ca/osborne/latex>.

2. Two players, two actions, perfect information

```
\begin{figure}[htb]
\hspace*{\fill}
\begin{egame}(600,280)
\putbranch(300,240)(2,1){200}
\iib{1}{ $L$ }{ $R$ }
\putbranch(100,140)(1,1){100}
\iib{2}[l]{ $a$ }{ $b$ }[ $1,1$ ][ $2,2$ ]
\putbranch(500,140)(1,1){100}
\iib{2}[r]{ $c$ }{ $d$ }[ $3,3$ ][ $4,4$ ]
\end{egame}
\hspace*{\fill}
\caption[]{}Two players, two actions, perfect information}
\end{figure}
```

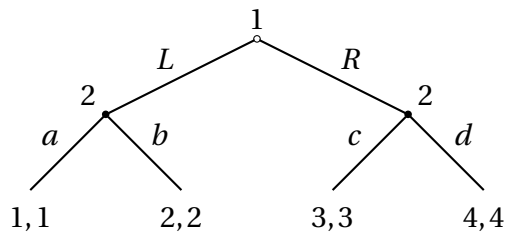


Figure 1. Two players, two actions, perfect information

3. Two players, two actions, simultaneous moves

```
\begin{figure}[htb]
```

```

\hspace*{\fill}
\begin{egame}(600,280)
\putbranch(300,240)(2,1){200}
\iib{1}{\$L\$}{\$R\$}
\putbranch(100,140)(1,1){100}
\iib{}[l]{\$a\$}{\$b\$}[\$1,1\$][\$2,2\$]
\putbranch(500,140)(1,1){100}
\iib{}[r]{\$c\$}{\$d\$}[\$3,3\$][\$4,4\$]
\infoset(100,140){400}{2}
\end{egame}
\hspace*{\fill}
\caption[] {Two players, two actions, simultaneous moves}
\end{figure}

```

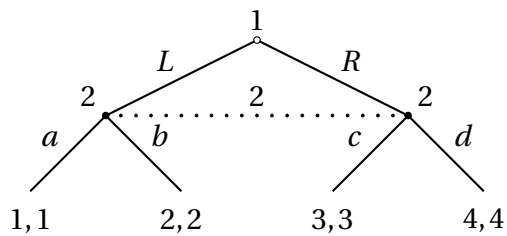


Figure 2. Two players, two actions, simultaneous moves

4. A signaling game, orientation 1

```

\begin{figure}[htb]
\hspace*{\fill}
\begin{egame}(900,700)
\putbranch(450,350)(1,0){300}
\iib{\$c\$}{\${1\over 2}\$}{\${1\over 2}\$}
\putbranch(150,350)(0,1)[r]{150}
\iib{1}{\$a\$}{\$b\$}
\putbranch(750,350)(0,1)[l]{150}
\iib{1}{\$b\$}{\$a\$}
\infoset(150,500){600}{2}
\infoset(150,200){600}{2}
\putbranch(150,500)(1,1)[u]{150}
\iib{}{\$L\$}{\$R\$}[\$-1,0\$][\$0,-1\$]
\putbranch(750,500)(1,1)[d]{150}

```

```

\iib{}{\$L\$}{\$R\$}[$1,0$] [$0,1$]
\putbranch(150,200)(1,1)[d]{150}
\iib{}{\$L\$}{\$R\$}[$2,0$] [$0,2$]
\putbranch(750,200)(1,1)[d]{150}
\iib{}{\$L\$}{\$R\$}[$3,0$] [$0,3$]
\end{egame}
\hspace*{\fill}
\caption[]{\text{Signaling game, orientation 1}}
\end{figure}

```

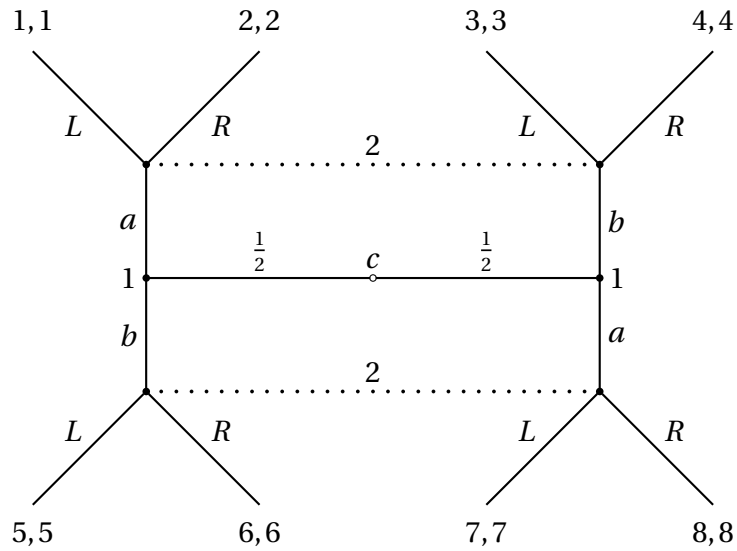


Figure 3. Signaling game, orientation 1

5. A signaling game, orientation 2

```

\begin{figure}[htb]
\hspace*{\fill}
\begin{egame}(760,940)
\putbranch(380,470)(0,1)[l]{300}
\iib{\$c\$}{\${1\over 2}\$}{\${1\over 2}\$}
\putbranch(380,170)(1,0)[u]{150}
\iib{1}{\$A\$}{\$B\$}
\putbranch(380,770)(1,0)[d]{150}
\iib{1}{\$B\$}{\$A\$}
\end{egame}

```

```

\infoset(230,170)[v]{600}{2}
\infoset(530,170)[v]{600}{2}
\putbranch(230,770)(1,1)[l]{150}
\iib{}{\$L\$}{\$R\$}[$1,1$][$2,2$]
\putbranch(230,170)(1,1)[l]{150}
\iib{}{\$L\$}{\$R\$}[$3,3$][$4,4$]
\putbranch(530,770)(1,1)[r]{150}
\iib{}{\$L\$}{\$R\$}[$5,5$][$6,6$]
\putbranch(530,170)(1,1)[r]{150}
\iib{}{\$L\$}{\$R\$}[$7,7$][$8,8$]
\end{egame}
\hspace*{\fill}
\caption[]{}{Signaling game, orientation 2}
\end{figure}

```

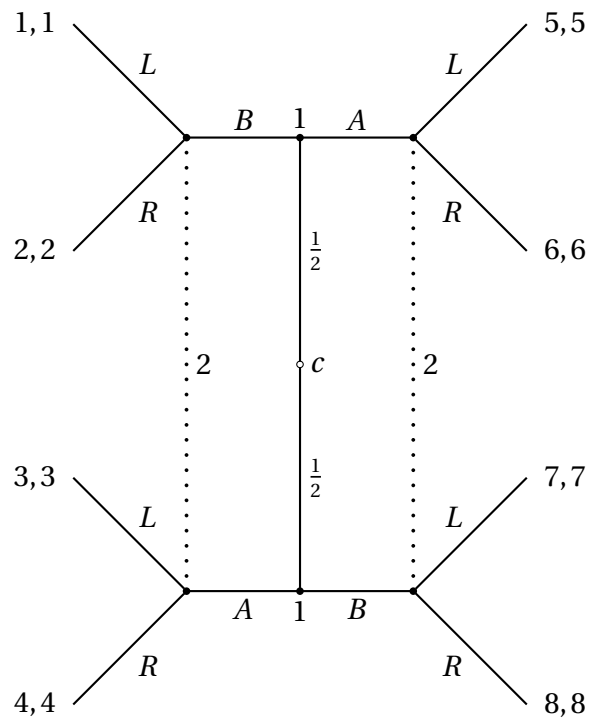


Figure 4. Signaling game, orientation 2

6. Selten's horse

```

\begin{figure}[htb]%
\hspace*{\fill}%
\begin{egame}(695,280)
\putbranch(100,240)(0,0){100}
\iib{1}{\$D\$}{\}
\initialtrue
\putbranch(100,240)(1,0){400}
\ib{}{\$C\$}
\egdirection{r}
\putbranch(480,240)(1,0){100}
\ib{}{\$c\$}[\$1,1,1\$]
\egdirection{d}
\putbranch(480,240)(0,-1){100}
\ib{2}{\$d\$}
\infoset(100,140){400}{3}
\putbranch(100,140)(1,1){100}
\iib{}{\$L\$}{\$R\$}[\$3,3,2\$][\$0,0,0\$]
\putbranch(480,140)(1,1){100}
\iib{}{\$L\$}{\$R\$}[\$4,4,0\$][\$0,0,1\$]
\end{egame}
\hspace*{\fill}
\caption[]{\emph{Selten's horse}}\label{f:horse}
\end{figure}

```

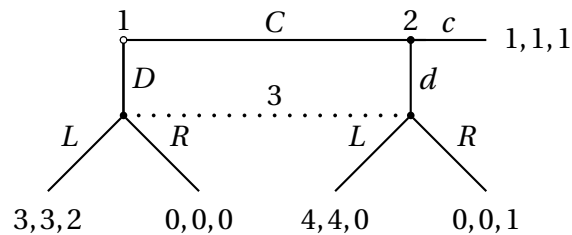


Figure 5. Selten's horse

7. Six-period centipede

```

\begin{figure}[htb]

```

```

\hspace*{\fill}
\begin{egame}(640,180)
\putbranch(0,140)(1,0){100}
\ib{}{\$C\$}
\putbranch(0,140)(0,-1){100}
\ib{1}{\$S\$}[$1,0$]

\putbranch(100,140)(1,0){100}
\ib{}{\$C\$}
\putbranch(100,140)(0,-1){100}
\ib{2}{\$S\$}[$0,2$]

\putbranch(200,140)(1,0){100}
\ib{}{\$C\$}
\putbranch(200,140)(0,-1){100}
\ib{1}{\$S\$}[$3,1$]

\putbranch(300,140)(1,0){100}
\ib{}{\$C\$}
\putbranch(300,140)(0,-1){100}
\ib{2}{\$S\$}[$2,4$]

\putbranch(400,140)(1,0){100}
\ib{}{\$C\$}
\putbranch(400,140)(0,-1){100}
\ib{1}{\$S\$}[$5,3$]

\putbranch(500,140)(1,0){100}
\egdirection{r}
\ib{}{\$C\$}[$6,5$]
\egdirection{d}
\putbranch(500,140)(0,-1){100}
\ib{2}{\$S\$}[$4,6$]

\end{egame}
\hspace*{\fill}
\caption[] {A six-period centipede game.} \label{f:cent}
\end{figure}

```

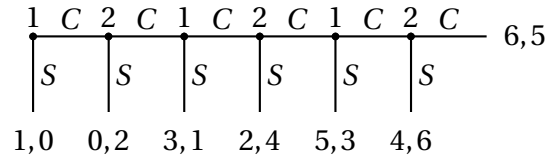


Figure 6. A six-period centipede game.

8. Another example

```

\begin{figure}[htb]%
\hspace*{\fill}%
\begin{egame}(810,290)
\putbranch(360,250)(3,1){360}
\iiib{1}{\$L\$}{\$M\$}{\$R\$}[\$1,1\$] [] []
\infoset(360,130){360}{\$2\$}
\putbranch(360,130)(1,1){90}
\egalhshift=18
\iiib{}{\$L\$}{\$R\$}[\$2,2\$] [\$3,3\$]
\putbranch(720,130)(1,1){90}
\egalhshift=18
\iiib{}{\$L\$}{\$R\$}[\$4,4\$] [\$5,5\$]
\end{egame}
\hspace*{\fill}%
\caption[] {An extensive game.} \label{f:se1}
\end{figure}

```

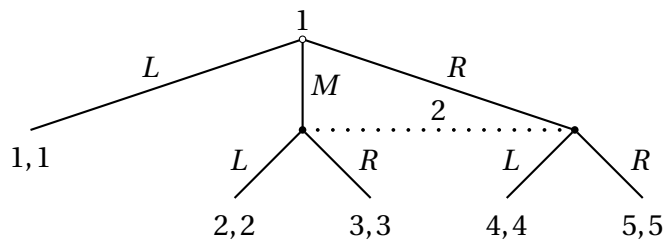


Figure 7. An extensive game.