The **bardiag** package: documentation part 2 *

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4 Horizontal mode

There is also a possibility to draw a diagram with horizontally oriented bars. An example of such a diagram is shown in Fig.4.1

The idea is that one has to be able to “rotate” a diagram without changing to much in the source. For this purpose a parameter `\bdorientation` is introduced. It should have one of two values: `\bdvert` (default) and `\bdhor`, meaning vertical and horizontal. The Fig.4.1 is drawn with the following piece of code

```
1 \begin{figure}[!ht]\centering
2   \renewcommand{\bdorientation}{\bdhor}
3   \input{figs/examp6.tex}
4 \caption{xxxx}
5 \end{figure}
```

Line 2 sets the orientation.

The main point here is that, while calling `bardiagrambegin` [see section 4.1 for the listing], one changes the meaning of its parameters. If before the arguments #1 and #2 meant X(=horizontal) and Y(=vertical) sizes of the framed part of the diagram, then now one has to call Y the direction along the bars. So, after
`\renewcommand{\bdorientation}{\bdhor}`
X becomes vertical and Y horizontal. It sounds crazy, I know. In fact, it means that you don't need to change the arguments of `\beginbardiag` to rotate the diagram. Only `\bdorientationin` should be redefined. The same holds for unit lengths (args #6 and #7).

The same idea may work for a legend - its argument are now “measured” perpendicular to the bars (#1) and along the bars (#2). Still, you will probably need to shift the legend by hand to make it look pretty.

Well, basically, that's it. Of course, the bar primitives, which are used to draw the “real things” should be aware of a possibility to draw them horizontally. All primitives supplied with this package work this way.

To demonstrate the concept let me draw the same diagram as in Fig.2.1, but now in the horizontal mode.

```
\renewcommand{\bdorientation}{\bdhor}
\begin{figure}[t]\centering
  \input{figs/examp1.tex}
\caption{\label{fig:1hor} \figref{fig:1} redrawn in the horizontal mode.}
\end{figure}
```

*This file has version number 0.5 and describes `bardiag` ver.0.5

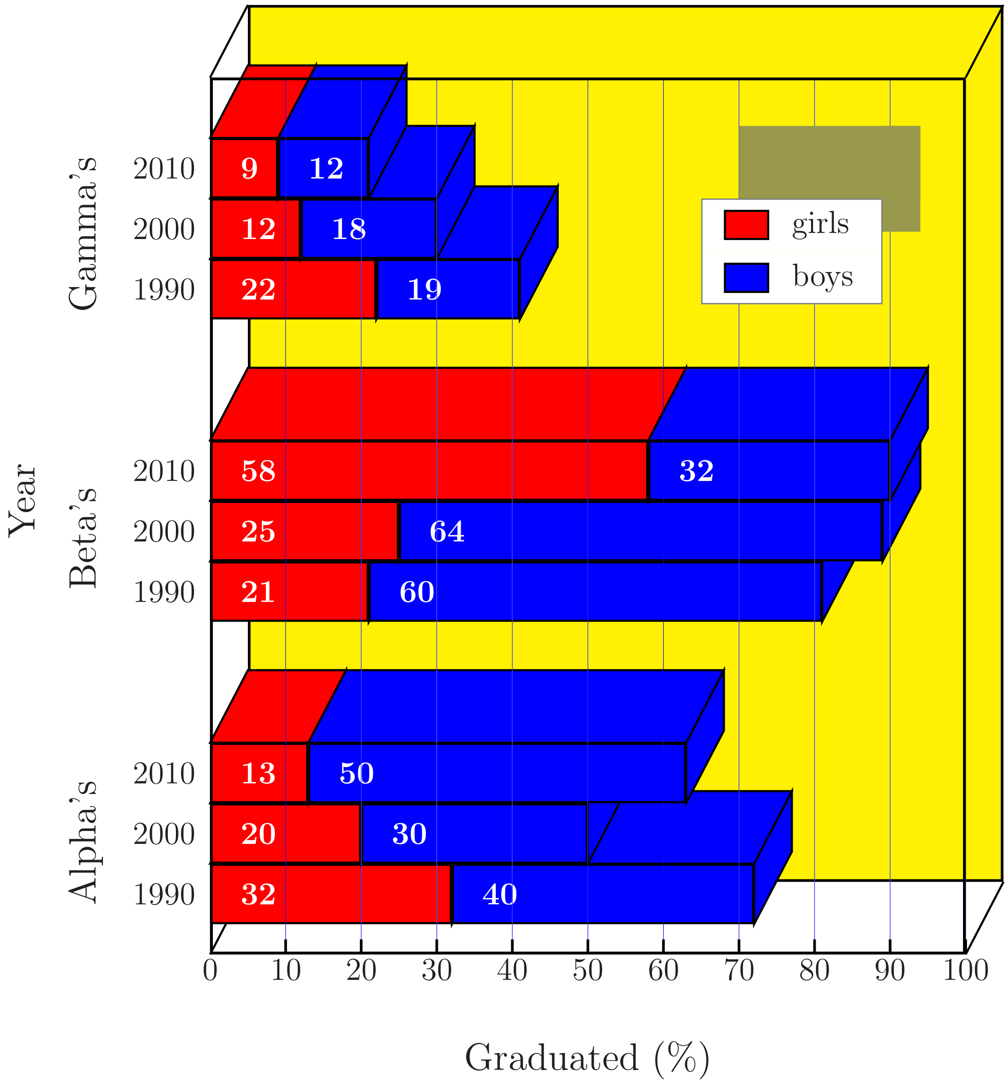

Figure 4.1: Example of a diagram drawn in the horizontal mode. Compare with Fig.3.1. The listing can be found in section 4.1

The result is Fig.4.2. It looks quite okay. However the same trick does not work with Fig.4.3 (which is Fig.2.1 plus a legend) [Fig.4.3]. You need to move the legend by hand.

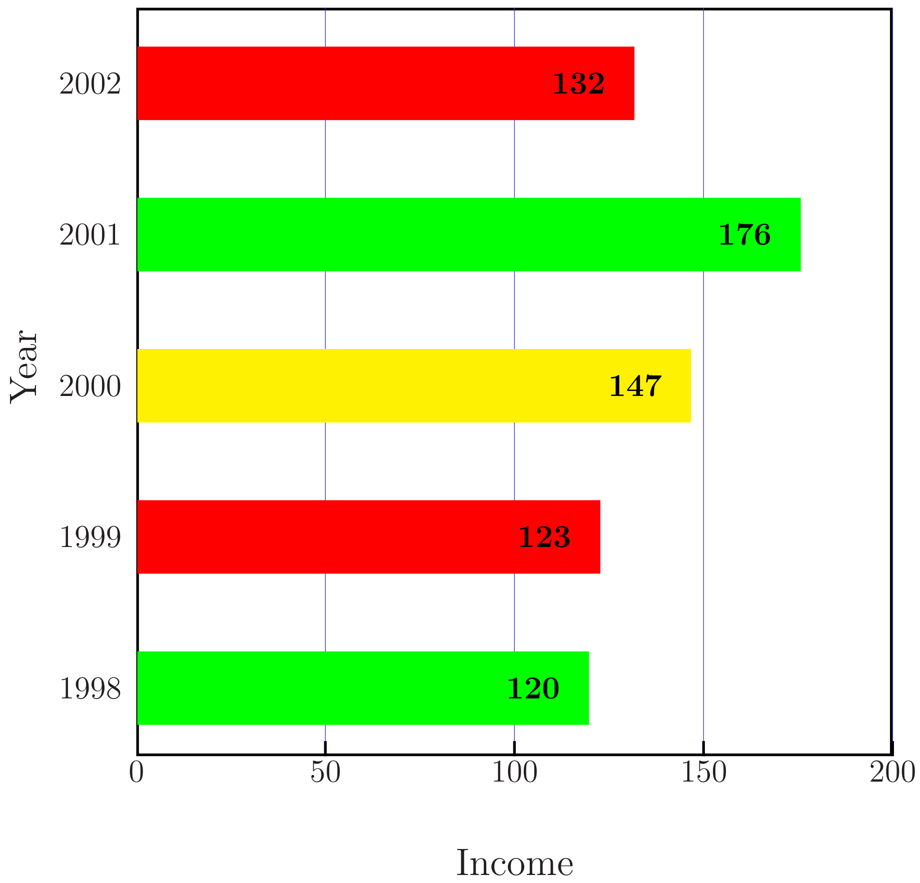

Figure 4.2: Fig.2.1 redrawn in the horizontal mode.

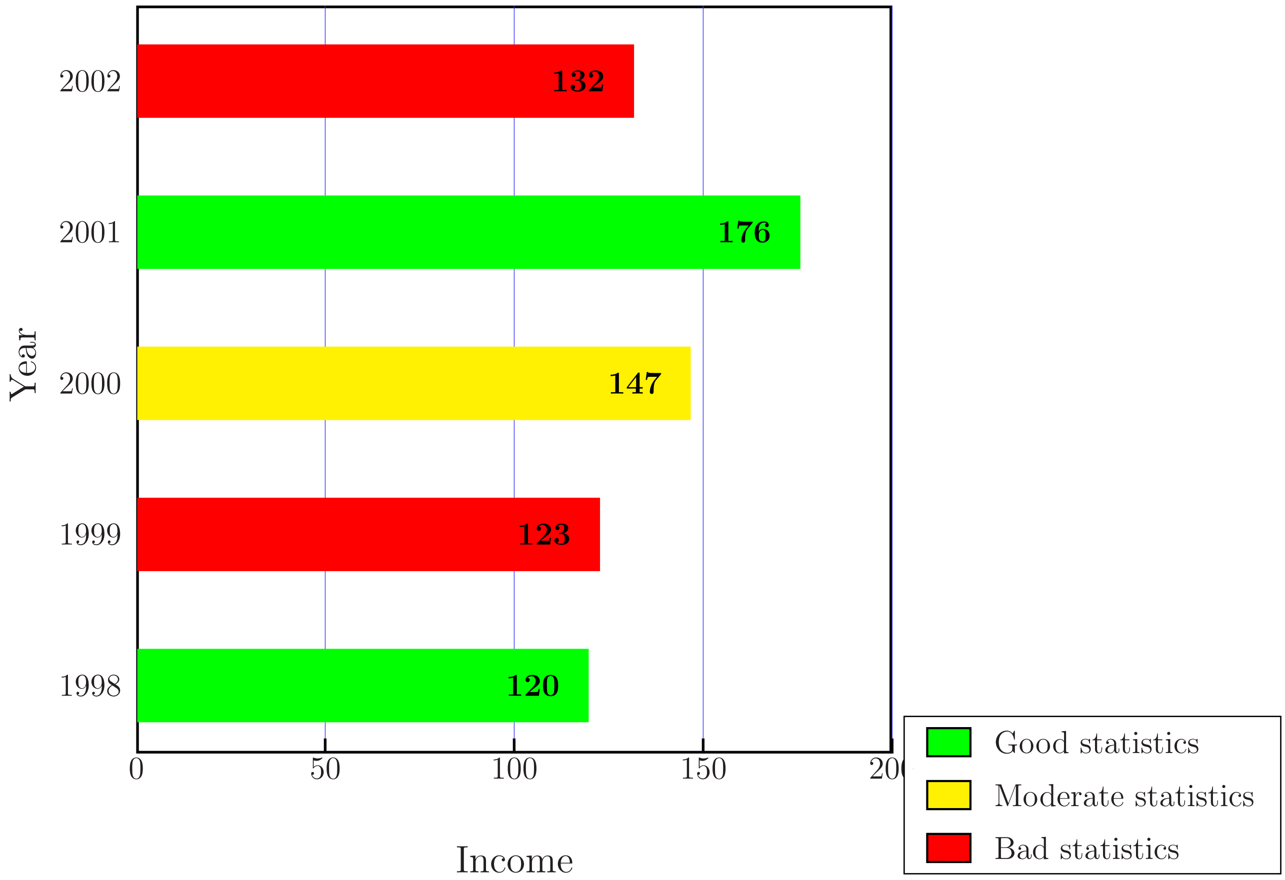

Figure 4.3: Fig.2.4 redrawn in the horizontal mode. As you see, the legend messes it up. Sorry, I cannot do anything about it.

4.1 Listing of the example Fig.4.1

```
\def\onecol{red}
\def\onetopcol{blue}
\def\twocol{red}
\def\twotopcol{blue}
\def\threecol{red}
\def\threetopcol{blue}
%-------------------------------------------------------
%This is the way to redefine styles
% \newpsstyle{mytickstyle}{linewidth=1pt,linecolor=blue}
%
% Style of the foreground frame
\newpsstyle{diagframestyle}{linewidth=1pt,linecolor=black,fillcolor=white}
% Style of the background frame
\newpsstyle{diagbgframestyle}{linewidth=1pt,linecolor=black,fillcolor=yellow}

% Use 3D bars
\renewcommand{\ActiveBarPrimitive}{\barTDRect}
% Make frame 3D
\renewcommand{\frameTD}{1}

% Put ticks and levellines each 10 yunits
\renewcommand{\betweenticks}{10}

% Color of the numbers on the bar-items
\renewcommand\numbercolor{\white\bf}
% Where to put the number. Can be \bottom,\belowtop,\overtop
\renewcommand{\placenumber}{\bottom}

\renewcommand{\tdx}{1.2} % depth of 3d
\renewcommand{\tdy}{6}

% Start the diagram
\bardiagrambegin{14}{100}{2cm}{1}{5}{0.8cm}{0.1cm}
      \baritem{1990}{32}{\onecol}
         \subtopbaritem{}{40}{\onetopcol}
       \subbaritem{2000}{20}{\twocol}
         \subtopbaritem{}{30}{\twotopcol}
       \subbaritem{2010}{13}{\threecol}
         \subtopbaritem{}{50}{\threetopcol}
      %---
      \baritem{1990}{21}{\onecol}
         \subtopbaritem{}{60}{\onetopcol}
       \subbaritem{2000}{25}{\twocol}
         \subtopbaritem{}{64}{\twotopcol}
       \subbaritem{2010}{58}{\threecol}
         \subtopbaritem{}{32}{\threetopcol}
      %---
      \baritem{1990}{22}{\onecol}
         \subtopbaritem{}{19}{\onetopcol}
       \subbaritem{2000}{12}{\twocol}
         \subtopbaritem{}{18}{\twotopcol}
```

```
        \subbaritem{2010}{9}{\threecol}
          \subtopbaritem{}{12}{\threetopcol}
\drawlevellines
    % Legend
    %  Let's make the background white
    %  and gray frame-line of 0.5pt
    \diagLegendoptions{white}{gray}{0.5pt}
    %
    \renewcommand{\legendShadowColor}{darkyellow}
    %
    \diagLegendbegin{12}{65}{3}
      \diagLegenditem{girls}{\onecol}
      \diagLegenditem{boys}{\onetopcol}
    \diagLegendend
    % End of the legend
\setlength{\captionoffset}{2cm}
\bardiagramend{\parbox{11cm}{{\centering \large Year\\[0.3cm]
   \hspace{-1cm}
   \begin{tabular}{p{3.2cm}p{4.0cm}p{3.2cm}}
      \centering Alpha's & \centering Beta's & \centering Gamma's
   \end{tabular}
  }}}
  {\large Graduated (\%)}
```