BVCC General Meeting

June 13, 2022

"Microsoft Word vs. LibreOffice Writer"

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Taking Notes?

- **A copy of these presentation slides will soon be made available on the BVCC website https://bvcomputerclub.org under "Information → Presentations"**

- **Slides are numbered in upper right in case you want to note something about a specific slide.**

Creating Documents - Most Basic

- **Notepad – creates text files (TXT). Only contains character codes, no control information for formatting or font modification, just lines of characters.**
  - **All computer Operating Systems contain some form of text editor that is compatible and free**
  - **Less-capable than typewriter: no control of page layout, no overprint (underlining), no partial line vertical control (superscripts, subscripts)**
  - **Some enhancements: can change & save display font & size (for the entire file); can display Unicode characters (but not easily create)**

Notepad Example

Notepad

Notepad allows you to create a basic text file (.TXT) of characters. You must force a new line by ENTER where you want it to occur or turn on word wrap so lines longer that your display window width will wrap onto following lines.. You can use spaces, tabs, ENTER for new line to influence appearance, but that's about it. You must use one font type and size for all characters in the entire document. Appearance of document displayed or printed varies depending on available width. No concept of pages.

Creating Documents - Wordpad

- **Originally only created Rich Text Format (RTF) files – contains both character codes and control information.**
  - **Requires an application that understands RTF files. Wordpad is free in Windows 95 and later, but by default RTF files will be opened by MS Word or LO Writer**
  - **More-capable than typewriter in some ways (variable fonts and size), but no control of exact page layout or page boundaries. Most useful for files read on computer. Lack of exact page control a problem when printing: may require many attempts with manual insertion of blank lines to get acceptable page splits.**
  - **Consistent use of formatting conventions throughout a large document requires careful manual editing, and tedious manual re-editing required to change conventions.**
  - **By Windows 10, Wordpad has been enhanced to provide additional controls, but not all features are supported in .RTF format, so the ability to store in other formats is also available.**

Word Pad Example

WordPad

Included with Windows. WordPad allows fancier documents than a typewriter, with varying fonts inside the document, margins, controls over paragraph justification. You can make internal headings within a document, but you have to micromanage the appearance of everything by yourself.

A Heading

Staying consistent within a long document very tedious.   Changing mind about appearance after document creation is tedious.   Documents saved in .RTF files.

Creating Documents – Word Processors

- **Word Processors provide controls to completely control the finished document appearance, including appearance of individual pages, support for embedded tables and images**
  - Most of the early competitors were Operating-System specific and not free: MS Word, Word Perfect, Lotus Word Pro, Ami Pro. Of these, MS Word gradually won out because of its inclusion in the MS Office Suite and an inside track on using features in new releases of Windows.
  - OpenSource free alternatives gradually evolved: StarWriter, StarOffice, OpenOffice, LibreOffice. These office suites were also designed to run on multiple Operating System platforms, an advantage for those using both Windows and Linux.
  - Now both MS Office and LibreOffice applications can read and create files with each others native file types; but there are some features that don't translate well, so they are not 100% compatible

MS Word vs. LibreOffice Write

- **Both products have a long history**
  - **MS Word - Word 1.0 (1983), Word for Windows 1.0 (1990), to Office 2021 & Office 365**
  - **Star Writer (1985) → Sun StarOffice (1994) → OpenOffice (2000) → LibreOffice (2010)**

- **MS Office Word is a commercial (non-free) product. There is also a free version available that has basic features, but not the complete feature set.**

Do I Really Need A Word Processor App?

- **If you've never used a word processor application before, you may not be certain you need one. If you don't already have access to an office suite like MS Office, it can be hard to justify spending money just to experiment.**

- **LibreOffice can be installed on Windows, Linux, and other platforms for free from https://www.libreoffice.org/ – allowing you to discover how essential a full-function word processor can be, and also provide an opportunity to experiment with companion presentation and spreadsheet apps if you have any interests in those types of documents.**

  - **There is enough similarity in function, terminology, and even icons that basic skills with LibreOffice make understanding MS Office easier as well.   If you later find reasons why MS Word or MS Office might be a better fit, much that you learned with Writer will also apply to MS Word.**

  - **Given the price (free), needing even part of the capability of Writer is enough to justify installing LibreOffice – you don't have to learn all the features or components of LibreOffice if you don't need them.   LibreOffice also provides the capability of viewing the content of most documents prepared with MS Office, even in cases where there are some incompatibilities.**

Features Common to Both

- **WYSIWYG – the way you see a page displayed is the way it will be saved and printed.**

- **Can customize appearance of characters, paragraphs, and pages**
  - **can do customization by direct formatting**
        or
  - **by indirect formatting using "styles" to allow global changes**

- **Support for including images and tables as part of document**

- **Table of Contents, Indexes, multi-level "numbered" lists, many other features**

- **Don't have to use or learn all features at once, just the ones you need. Google will locate help and tutorials on how to do something new.**

Basic Document (Word)

- **MS Word using "Blank Document" template**
  - **Multiple "ribbons" of icons selected by tabs – default Home Tab to select Fonts, Paragraph controls, and Styles**
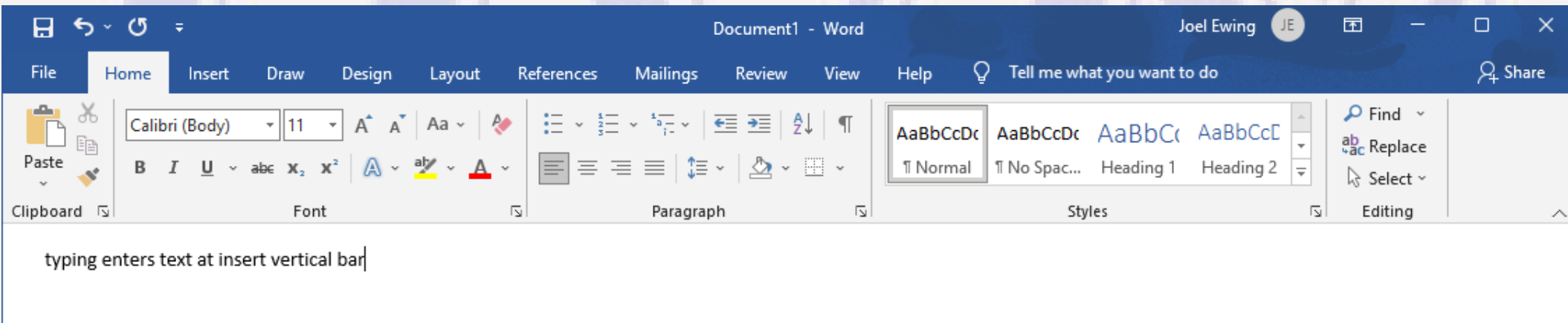
Basic Document (Writer)

- **LibreOffice Writer using "default" template**
  - **Default user interface is menu items with sub-menus and one set of icons, but that includes same actions as MS Word Home ribbon.**
  - **Note difference in default font (Liberation Serif 12pt vs Word Calibri 11 pt) – OpenSource vs proprietary fonts), and in name of default Style ("Default Paragraph Style vs "Normal")**
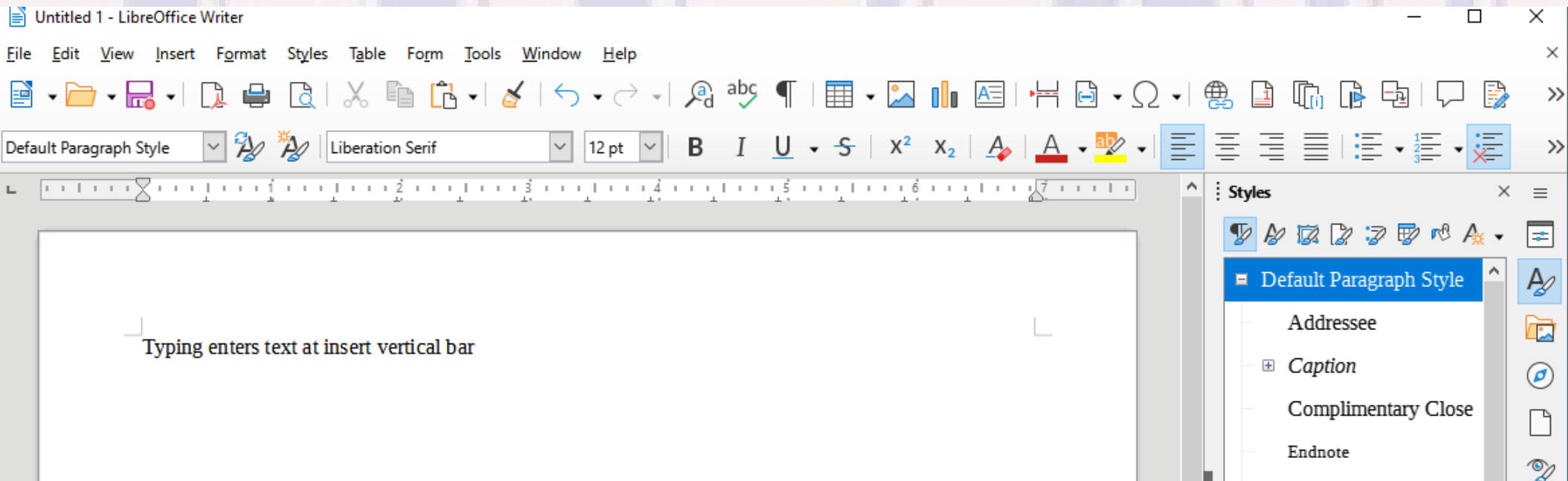
Basic Document (Writer)

- **LibreOffice Writer also supports a User Interface option to use ribbons similar to MS Office**
  - **See the User Interface in sub menu under View menu**
  - **An attempt to make LibreOffice more "friendly" to someone already familiar with the MS Office user interface.**
  - **I frankly prefer the standard toolbar as some important things seem to be missing in ribbon mode that were easily accessible in toolbar mode (e.g., there is no obvious way to see a list of ALL available Styles).**
  - **May be more difficult for a new user to learn than with menus & sub menus – some of the icons are not obvious and it takes time to find and learn where all the useful icons are hidden on all the ribbons**
  - **Changing the User Interface from Ribbon mode back to the Standard Toolbar is well hidden. The original Toolbar with "View" menu is gone in ribbon mode, and User Interface is not on any of the ribbons – you have to click the "hamburger" ☰ menu on far right near the top to find "User Interface".**
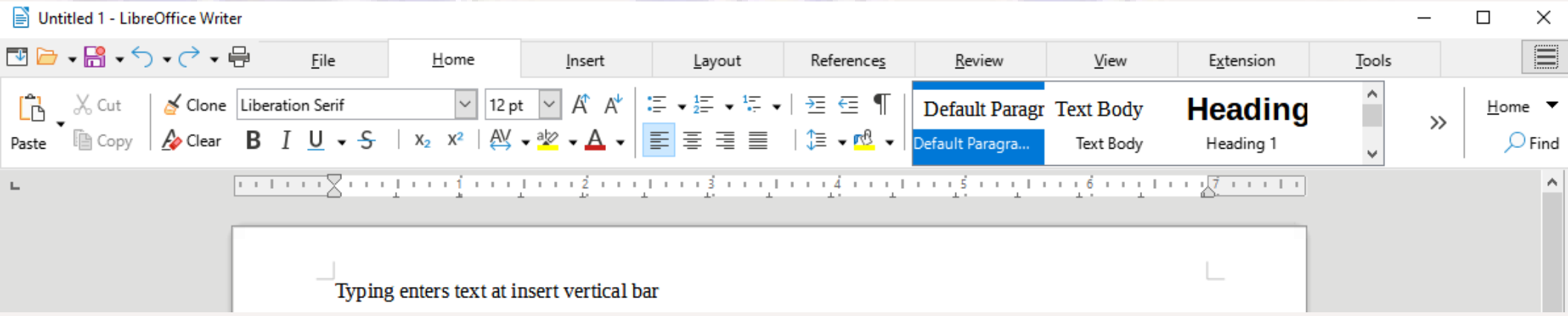
Using Direct Formatting (Writer)

- **Can apply formatting as you go, or after enter multiple "paragraphs" (Each ENTER is a new "paragraph")**
  - **There is an advantage to starting the next paragraph before using direct formatting – new text defaults to attributes of immediately preceding text**
- **Default is "Default Paragraph Style", Liberation Serif 12 pt, Left-Justified**
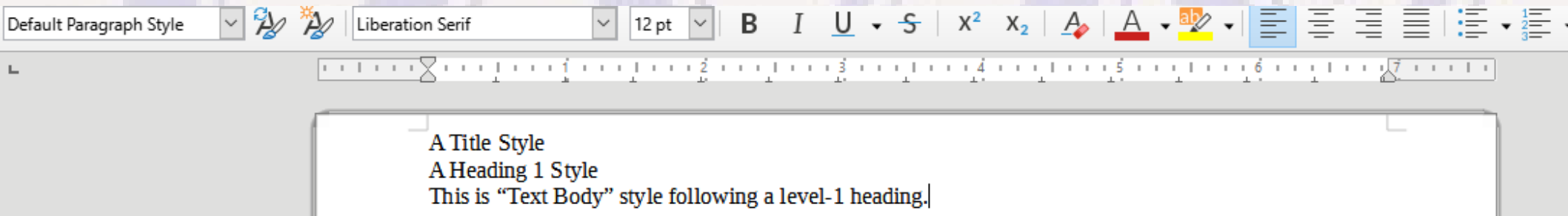
Using Direct Formatting (Writer)

- **Select the title line.**

- **Select font from pull-down list, select font size, select Bold font style, and select Centered icon. The "Style" is unchanged, but direct formatting overrides.**

Using Direct Formatting (Writer)

- **Similarly select the Heading 1 line, directly type a font size of 16.2 (just to prove values other the pull-down list can be used) and select Bold. Note there is no extra vertical spacing before the following paragraph.**
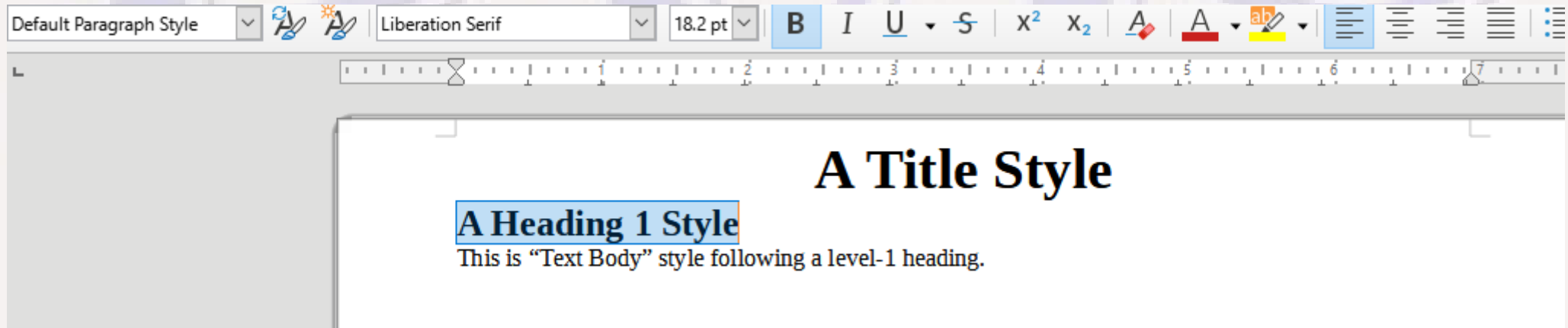
Using Direct Formatting (Writer)

- **If you want to add extra vertical spacing after the heading, right-click with the heading selected. select "Paragraph"and sub menu "Paragraph", ...**
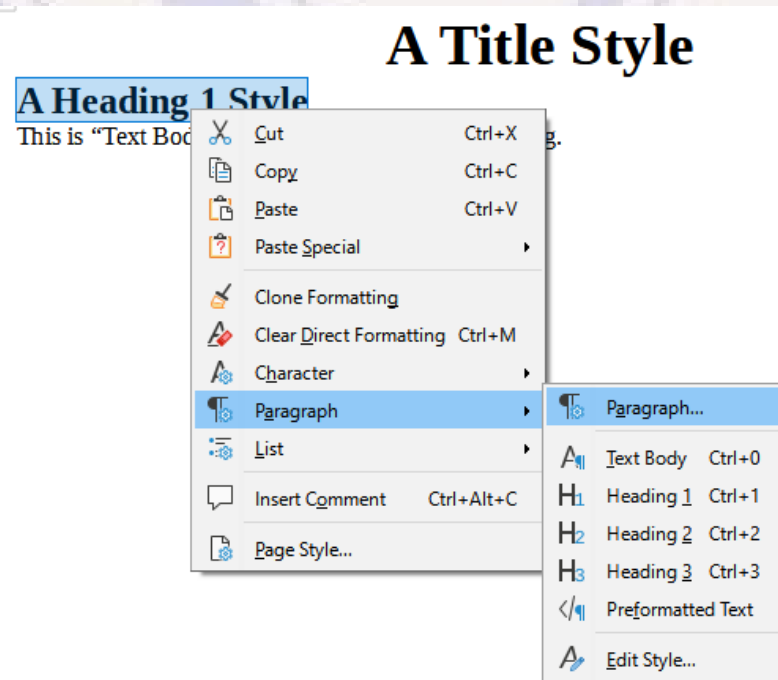
Using Direct Formatting (Writer)

- **Then in the Paragraph attributes window, select the "Indents & Spacing" tab and set desired spacing above and or below the paragraph (which is the heading in this case). I chose 0.25" below. Then select "OK" to make the change.**
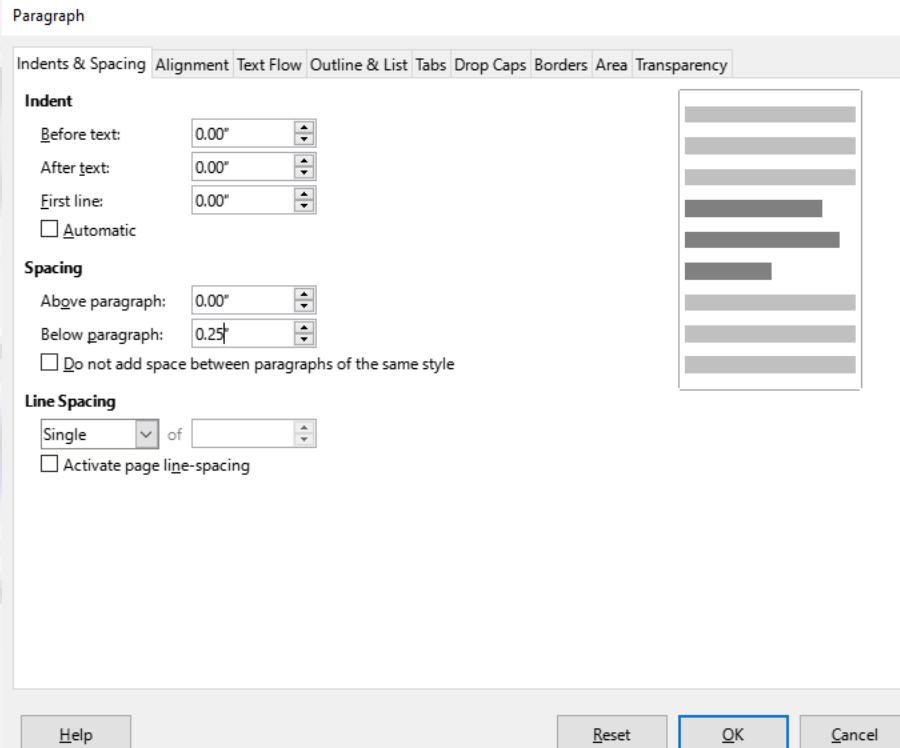
Using Direct Formatting (Writer)

- **The heading "paragraph" now has 0.25" vertical space below – there is no line after the heading, just vertical space that is part of the heading itself.**

Direct Formatting in MS Word

- **The process is almost the same in Word, except that you have the choice of using similar Font and Paragraph icons in the Home ribbon, using the icons that appear in a pop-up window when the text is first selected, or making settings in either the Font… or Paragraph… pop-up window when Font… or Paragraph… is selected from right-click on the selected text.**

Limitations of Direct Formatting

- **Works OK for short, simple documents**

- **When it becomes repetitious (long documents with many headings and sub-headings, or a large number of shorter documents), use of Direct Formatting becomes tedious and error prone**

- SOLUTION: Instead of Direct Formatting, assign Styles (which can alter multiple font and paragraph attributes) to paragraphs and text strings
    - There are a number of predefined styles in both Word and Writer for different functional uses, Titles, Headings of multiple levels, footnotes, list items, etc., based on starting template
    - MS Word also has a Design Ribbon which allows you to chose from among a number of different style sets to use for the document and pick the one you find most pleasing
    - Styles may be modified or new styles created and they are saved as part of document
    - Direct Formatting can still be used for special cases where repetition not an issue

Styles

- There are pre-defined Styles associated with an initial template or base document used to create a new document.

- Styles for use on only a piece of a paragraph can only alter character (font) settings; Styles used on an entire paragraph can alter both paragraph and character settings.

- In Writer, a Style must be either a character style or a paragraph Style (and there are other kinds of styles).   In Word, a style may be defined as character, paragraph,or both. When a style is used in a character context, only character-related settings are honored.

- Style definitions include a "parent" style from which attributes will be inherited if not explicitly set.

- Existing Styles may be modified and/or new Styles created

- Naming conventions for Styles should indicate the functional description of the text in a document to which they will be applied (normal paragraph, quoted text paragraph, title, sub title, headings, etc).

- Direct Formatting will override Style settings. If a Style is not being honored, you may have direct formatting that was applied to the same text that needs to be cleared (select text and 🅰)

Using Styles (Writer)

- You can select a new paragraph style just before you type 1st character of its paragraph and that style will be applied to the paragraph as you type – depending on the style definition, after ENTER to end the paragraph the next-paragraph style may change. Or you can enter multiple paragraphs and then go back to select paragraphs or characters and assign a different style.
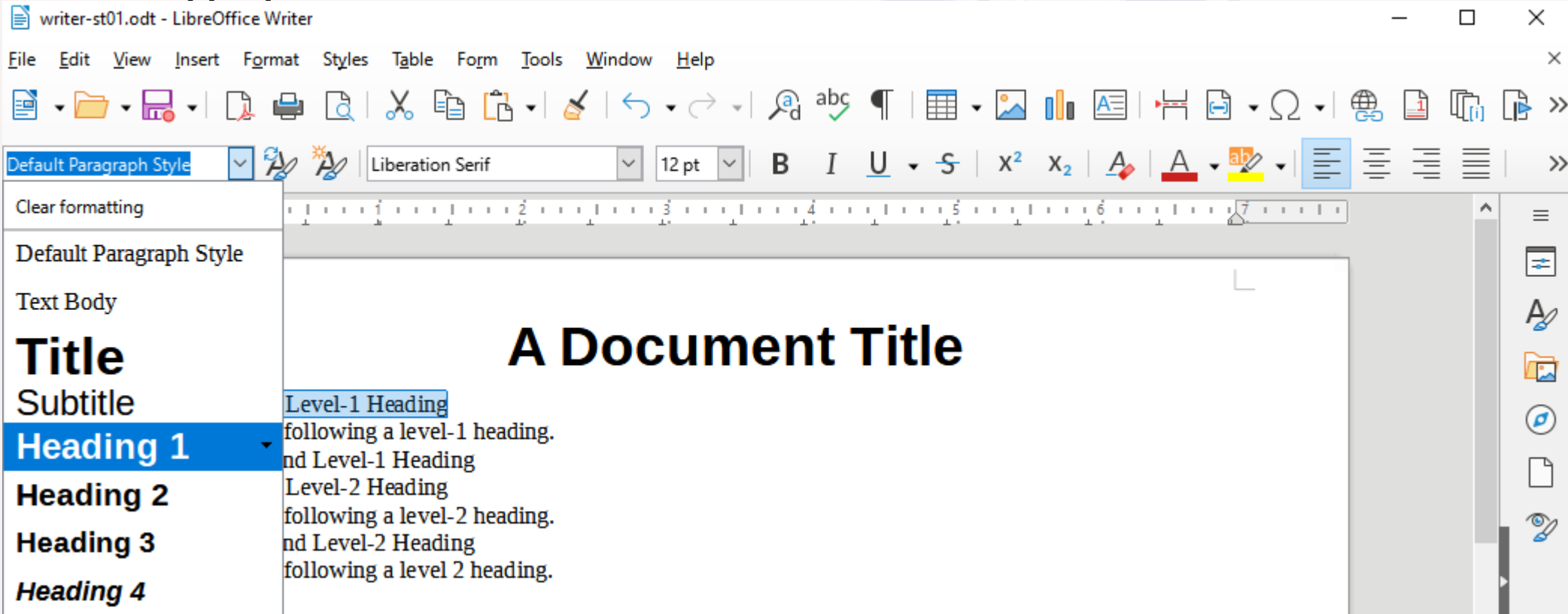
- Select the text to which a new style should be assigned
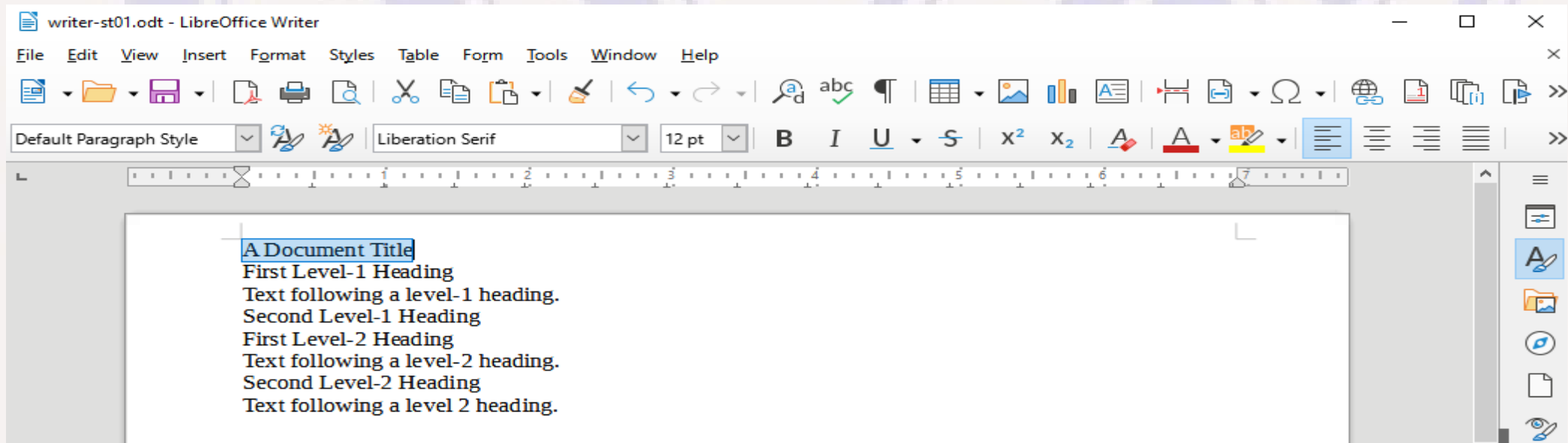
Using Styles (Writer)

- Can then select a new style to apply by clicking on style in pull-down list on the left above the ruler, or by double-click on a style in the Styles frame on the right (from "More Styles" or by clicking on the ⚏ styles icon on the right).

- The Styles frame includes all defined styles, but defaults to just showing paragraph styles; the styles pull-down list is shorter and may not include a style not yet used in the current document
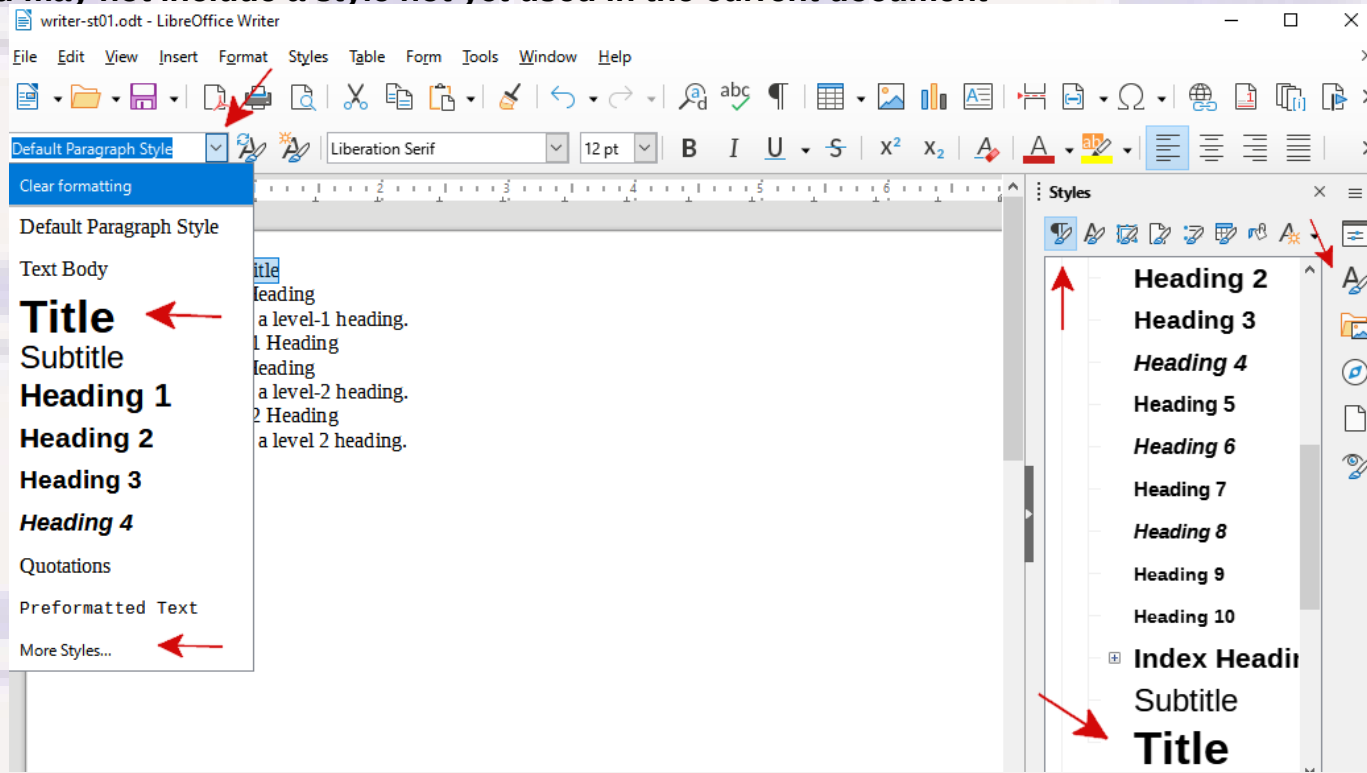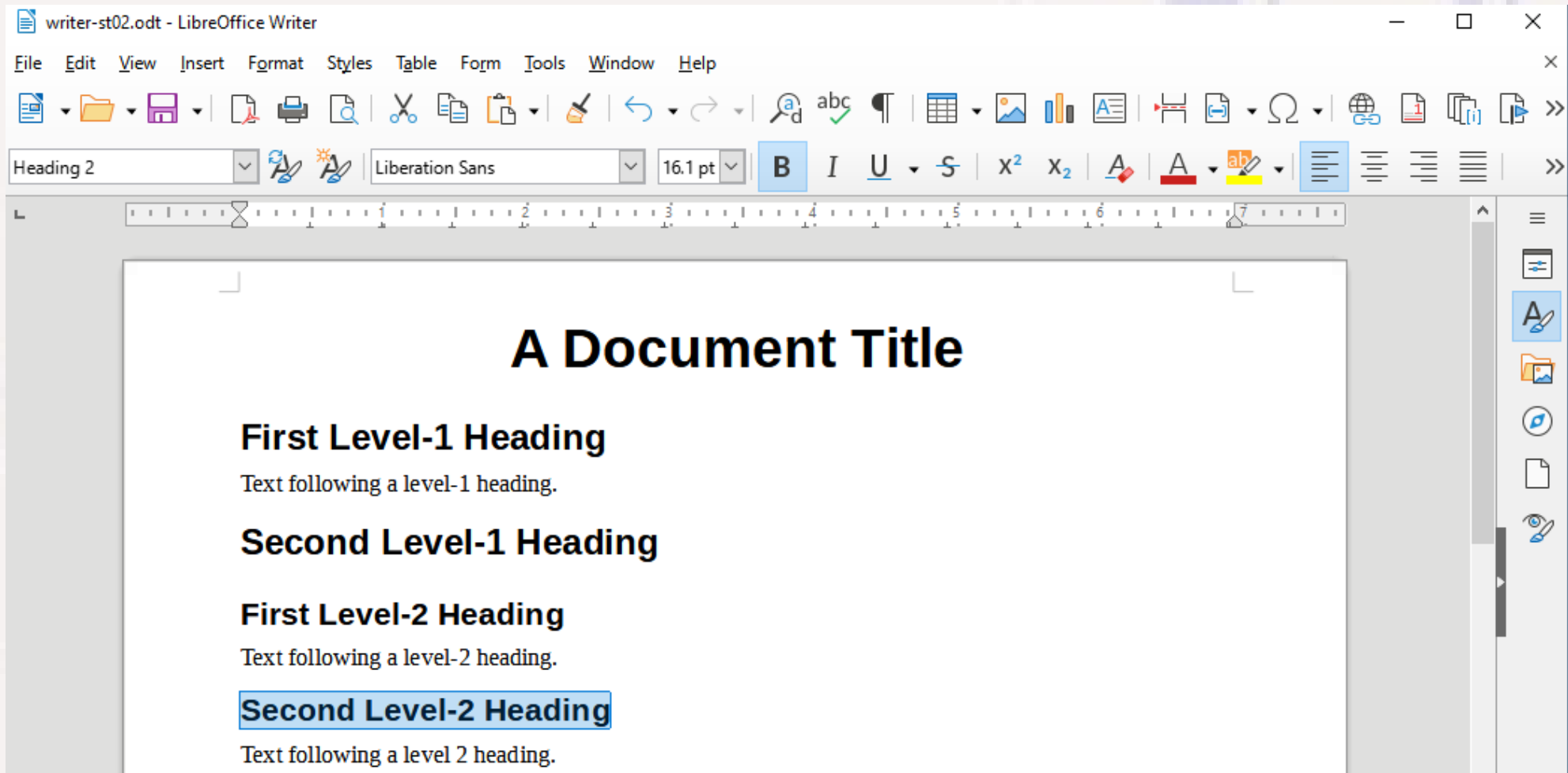
Using Styles (Writer)

- **Similarly, select other paragraphs and assign "Heading 1" and "Heading 2" styles as appropriate.**

After All Headings Have An Assigned Style

Saving a Writer Document

- **To preserve all Writer functionality use native ODT format – can be used by MS Word with some inconsistencies**

- **Can also save in other formats – may warn of possible feature loss and may display differently, but can still be edited by Writer**
  - **DOCX – native MS Word (Word reading ODT may be different)**
  - **DOC – MS Word 97- 2003**
  - **HTML & RTF – limited function: variable width and no "pages"**
  - **others**

- **Can export as a PDF document – an accurate rendering of all pages, but not generally editable – a good distribution format**

How Word Renders Previous Writer Document

- **The headings have correct style name, but font size is wrong (all 14 pt)**
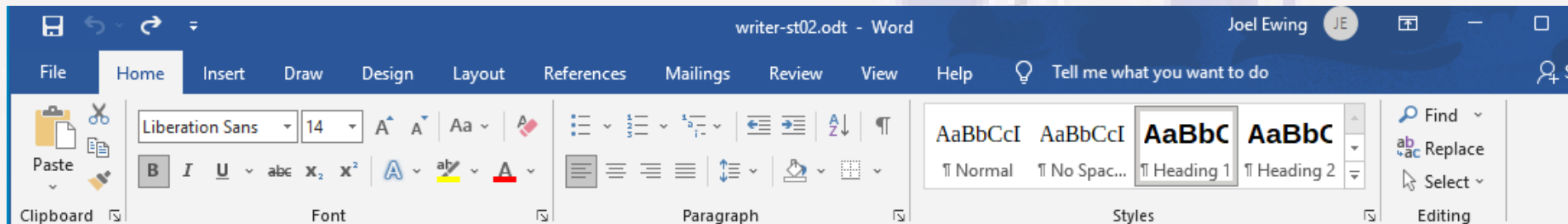
How Word Renders Previous Writer Document

- **Reveals incompatibility in font support between Writer and Word: Writer allows a style to specify font size as a percent of the inherited font size which in this case is the 12pt font size of Default Paragraph Style (130% or 18.2pt for Heading 1, 115% or 16.1pt for Heading 2). Word does not allow percents for font size or non-integer pt sizes.**
    - **Can make approximate fix for this document by editing on Word to set the Heading 1 Style to 18pt font size and Heading 2 Style to 16pt font size**
        or
    - **Change the Heading style definitions in Writer to use integer size in pts rather than percent for font sizes before saving the document in ODT file format**
        or
    - **Instead of saving in Writer native ODT file format to retain all functionality, explicitly save in DOCX Word file format. There will be a warning of potential incompatibility, but if you force DOCX format, Writer will automatically convert all the Heading styles from percent to actual pt values. If Writer is used to edit that DOCX file, you should see the same header sizes as in Word.**
        - **What you lose in Writer by doing this: Headers will no longer scale proportionally when the font size of Default Paragraph Style is changed. You would have to manually specify new font sizes for the individual Heading styles if you want their size to change when you change the font size of a default paragraph.**

How Word Renders Previous Writer Document

- **After changing Heading 1 Style to 18pt font size and Heading 2 Style to 16pt font size**
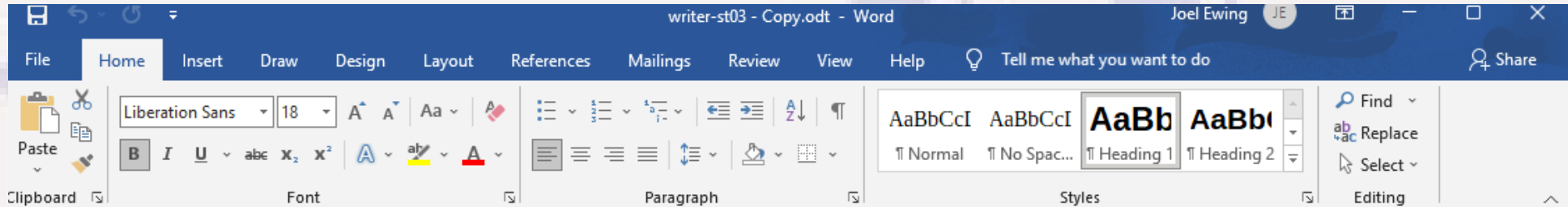
Using Styles in MS Word Document

- **Like Writer, available styles depends on template chosen for new document.**
- **Unlike Writer there are different Style designs that can be selected from the "Design" ribbon. Return to the "Home" ribbon to assign styles.**
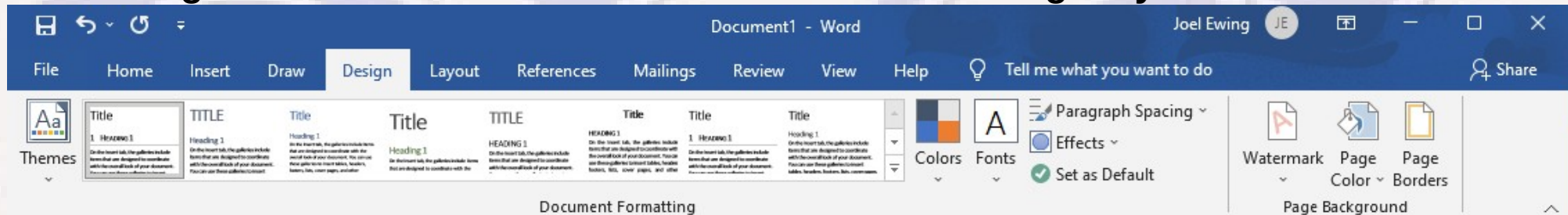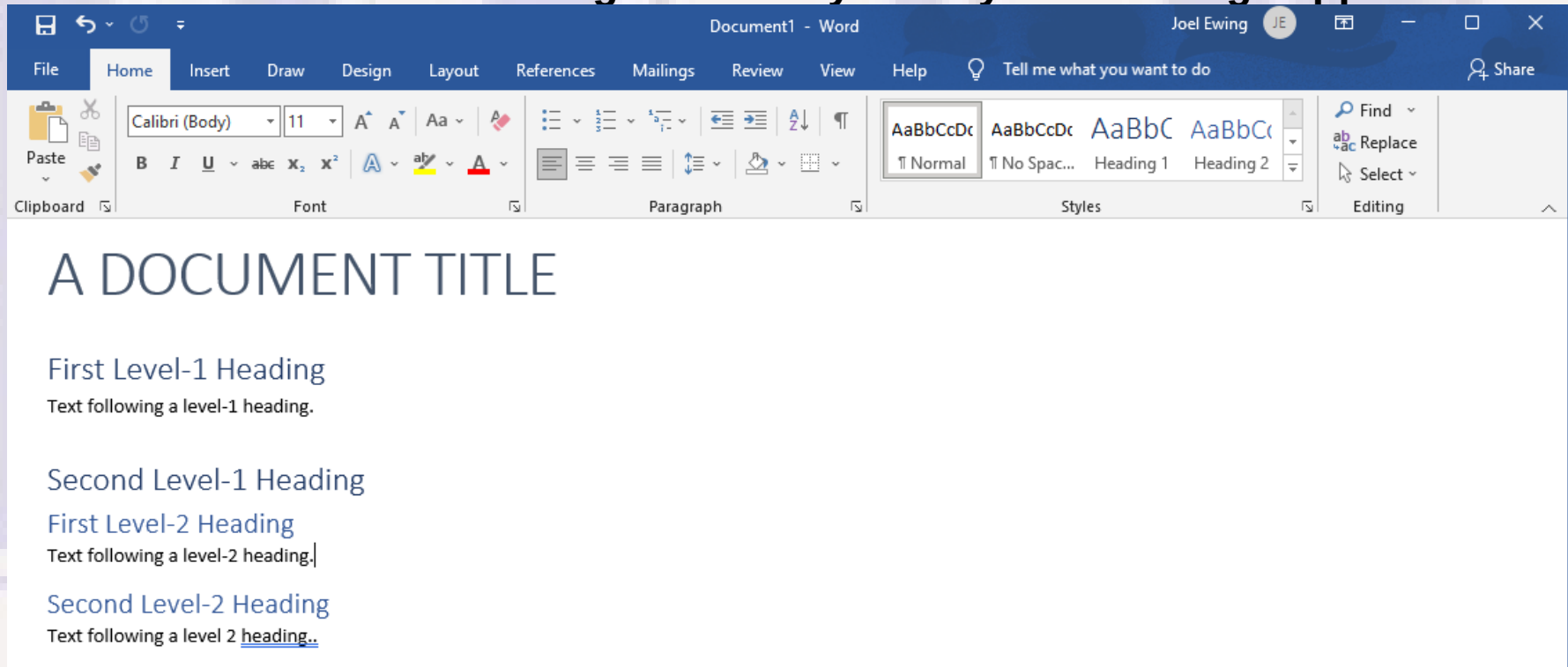
Applying Styles in MS Word

- **Select the text to be assigned a style. Then click on a style from the Styles in the Home ribbon, from the Styles frame opened by bottom-right icon in Styles on the Home ribbon, or in the styles pop-up window from selecting Styles in the pop-up window when the text is first selected. Hover over a style to get a preview of its effects.**

Applying Styles in MS Word

- **Similarly applying Heading 1 & 2 styles to their respective lines gives the following result – somewhat different than default Writer appearance, but can either choose a different design or modify the styles to change appearance.**

Saving a Word Document

- **To preserve all Word functionality use native DOCX format – can be used by LO Writer with some inconsistencies**

- **Can also save in other formats – may warn of possible feature loss and may display differently, but can still be edited by Word**
  - **ODT – native LO Writer (Writer reading DOCX may be different)**
  - **DOC – MS Word 97- 2003**
  - **HTML & RTF – limited function: variable width and no "pages"**
  - **others**

- **Can export as a PDF document – an accurate rendering of all pages, but not generally editable – a good distribution format**

Reading Previous DOCX File Using Writer

- **Note that styles from Word are faithfully rendered**
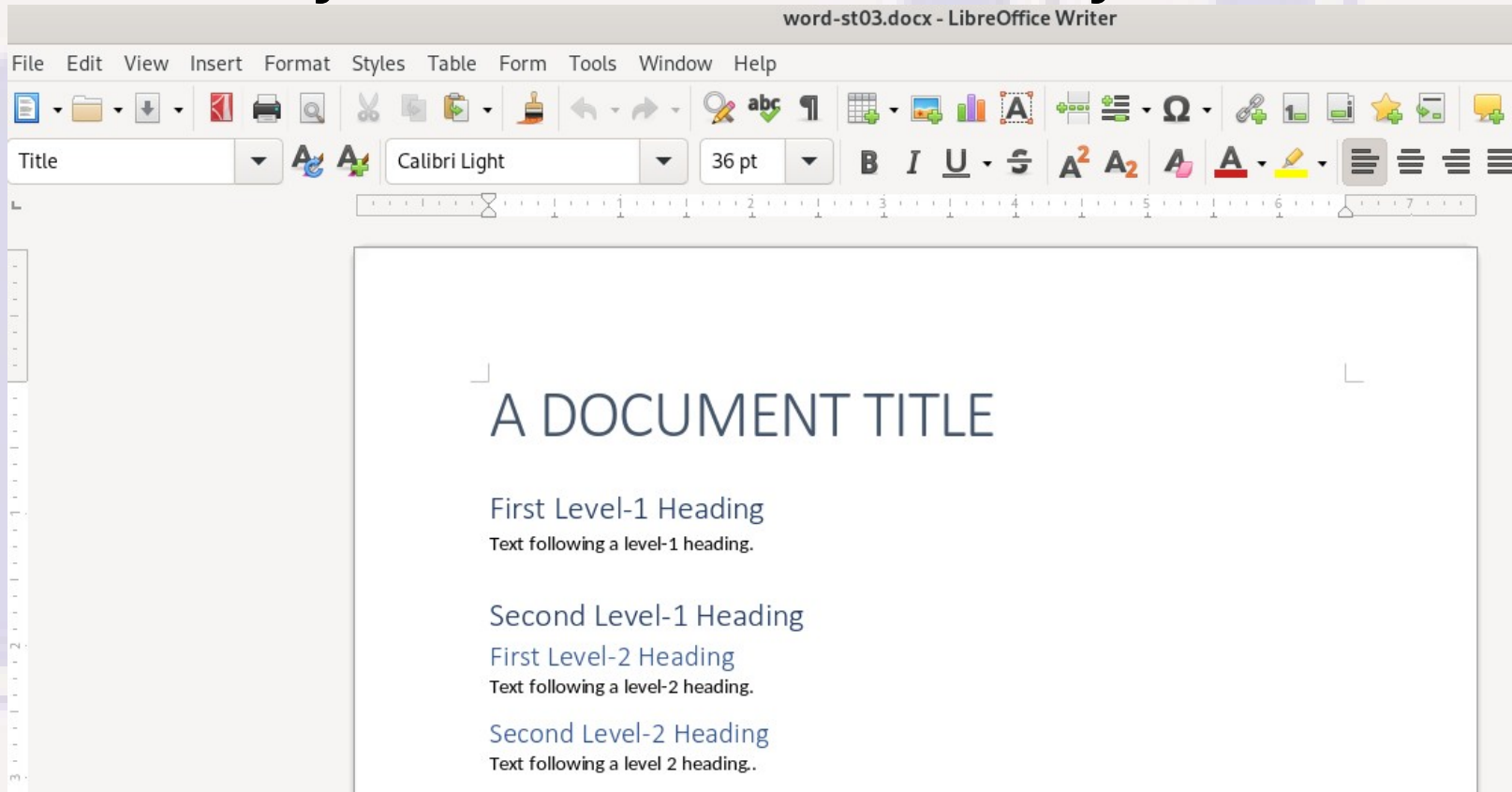
A Word About Fonts

- **MS Office includes a large number of fonts, as does LibreOffice, some for the Latin alphabet, some for alphabets used by foreign languages**
  - **LibreOffice fonts are all OpenSource or public domain fonts**
  - **MS Office includes proprietary fonts, so not all fonts available in MS Word are available in LO Writer and vice versa – for an unavailable font, a best-guess match is attempted, but even minor differences in character metrics may effect where line wrap or page breaks occur.**
  - **Fonts are actually managed by the Operating System, so if both MS Office and LibreOffice are installed on the same system, both will see each other's fonts, but that wouldn't be true for a document sent to someone with only one installed.**

A Word About Fonts (cont)

- **For documents expected to be shared among users that might use either MS Word or LibreOffice, stick to fonts that have compatible equivalents if possible. Others may work OK, but less certain.**

Fonts With Compatible Metrics			
LibreOffice	**Variants/styles/subfamilies**	**Type**	**MS Office**
Caladea	Regular, Bold, Slanted, Bold Slanted, Quran	Serif	Cambria
Carlito	Regular, Bold, Italic, Bold Italic	Sans	Calibri*
Liberation Mono	Regular, Bold, Italic, Bold Italic	Mono	Courier New
Liberation Sans	Regular, Bold, Italic, Bold Italic	Sans	Arial
Liberation Sans Narrow	Regular, Bold, Italic, Bold Italic	Sans	Arial Narrow
Liberation Serif*	Regular, Bold, Italic, Bold Italic	Serif	Times New Roman
	(* Default)		

Unordered and Ordered Lists
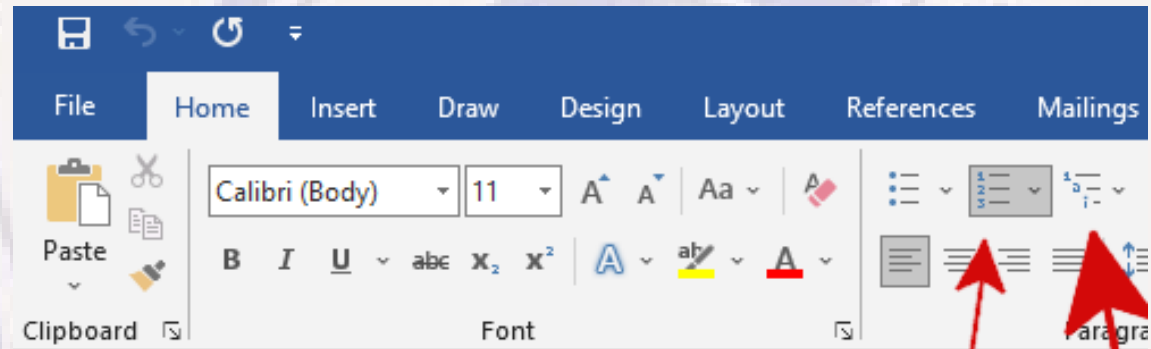
- **Both appear to translate well between Word and Writer; Multi-Level List can be used to customize enumeration style,**
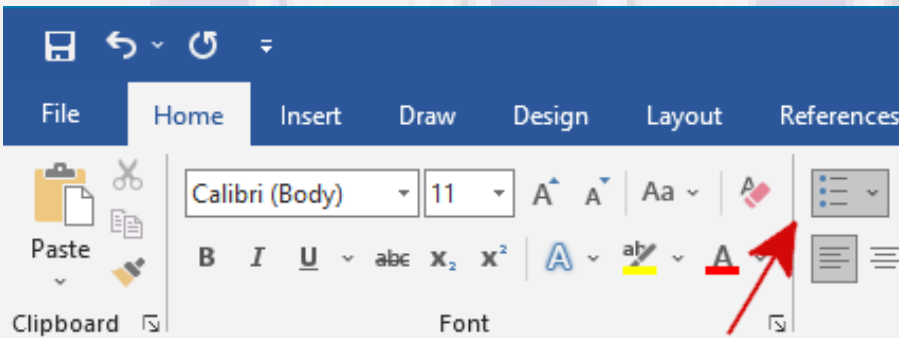
Unordered and Ordered Lists

- The icons in Writer for Bullet and Numbered lists are very similar, but customized numbers are controlled from "More Numbering" or from "Bullets and Numbering…" under the Format menu.

- The "Multi-Level List" icon in Word has support for numbered sections and chapters, but this is actually done with Heading Styles, not lists. In Writer this is controlled from Tools, "Chapter Numbering", which allows you to use one or more heading levels for auto-numbered divisions within the document.

BVCC By-Laws

Article I.   Purpose and Policies

Section 1.

The Bella Vista Computer Club Inc. (herein referred to as the Club) is organized for charitable and educational purposes…

Section 2.

The Club proposes to obtain, or, secure the use of such equipment as may be necessary to educate…

Article II.   Membership and Dues

Unordered and Ordered Lists

- **Lists appear to translate well between Word and Writer.**

- **Using numbering with headings going from Writer to Word seems to pick up some inconsistencies in spacing between the label (e.g. "Article VII") and the heading text. Suspect that might be resolved with a judicious alteration of tab stops, and is more likely to be seen with Roman numerals, which have much more variation in width than Arabic numbers.   May be visually annoying but doesn't impact readability.**

Images/Pictures

- **Supported in both Word and Writer**

- Images/Pictures may be inserted in-line as if it were at a character position: text split at insertion point with image in between. This is the default for Word.

- Image may be anchored to a paragraph: position is set relative to the paragraph, moves to another page if the paragraph moves. In Word this is done by setting a "With text wrapping" option for the picture in the "Layout Options" with the picture selected. Other settings in the Layout Ribbon determine the orientation of the picture relative to the paragraph. This is most useful option. In Writer, all the image positioning, alignment, anchor, and wrapping action are reached from a right-click on the image, except for re-sizing and moving the displayed image which use mouse and drag-drop.
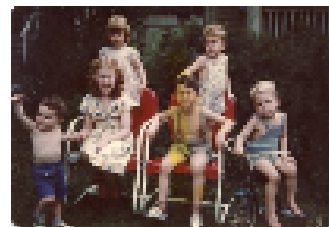
Images/Pictures

- **Inserting an Image on your computer into a Document**
    - **Helps to already have text entered that will be below the image**
    - **Set the input entry cursor to the position or paragraph needed**
    - **For Writer, use "Insert" menu and "Image…" sub menu.
      For Word, use Insert ribbon, "Pictures" icon, select "This Device…"**
    - **Select desired folder and then the correct file within that folder**
    - **Adjust the display size of the image as needed**
    - **Set the wrap mode for text around the image**
    - **Fine-tune the image position**

Images/Pictures

- **Re-sizing: Images may be proportionally re-sized by selecting the image, then selecting and dragging the handle on a corner of the image. Don't drag the handles in the middle of a side unless you deliberately want to distort the image.**
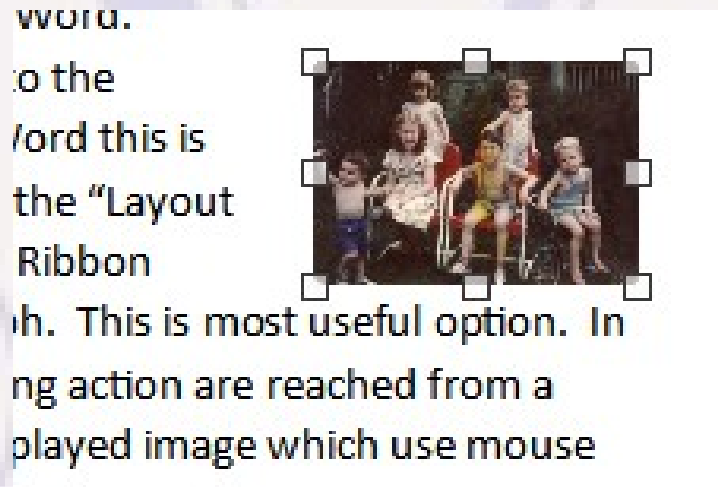
Images: Word-Writer Inconsistencies

- **Images anchored to a paragraph (not-inline) change position inappropriately when not edited by the same app that created the document. Can manually move to correct position.**

- **Writer seems more prone to doing "strange" things when you try to anchor multiple images to the same paragraph or insert overly-large images: hides one or more images, inserts image in wrong place, moves your document display point to a different place in document. Can usually circumvent (re-size image, cut and paste into correct position)**

Images: Word-Writer Inconsistencies

- **Image positioning: Typical horizontal align is Left, Center, or Right; but can also change position by select, drag, and drop. Writer is pretty liberal in what it will allow. Word seems overly restrictive – may only allow vertical movement in some cases.**

- **Image Captions: Both Word and Writer have options to add a caption to an inserted image. Word seems less user friendly here than Writer: by default, won't position the caption correctly relative to the picture and no obvious tools to fix.**
  Writer by default created a properly-sized rectangular frame for the image and inserted both that and the caption into the frame so that they always move together.
  Word can be made to work, but you have to manually create a "text box" frame, insert the image into it, insert the caption, then manually re-size the image and frame as desired.

Figure 1: Cousins

Images: Word-Writer Inconsistencies

- **Resolution: If you insert images whose resolution is radically higher than needed to display at the document's normal display size, you will typically get a final document file that is much larger than really needed.**
    - **With Writer, use GIMP or other image editor to create a lower-resolution version of the image to insert;**
    With Word, after image is set to final document display size, you can select an image and use Adjust on "Picture Format" ribbon to reduce the resolution of one or all images appropriately – but you must remember to do this.
    - **Inserting an overly-high-resolution image into Word is less of a pain than with Writer, because Word shows a reduced size version that is easy to adjust for correct display size. Writer attempts to show full-size image which may cover multiple pages, which requires multiple drag and drop re-size actions to get down to a manageable size that can be placed on the correct paragraph. Working with radically over-sized images can also cause "strangeness" or outright failures in Writer.**
    - **Occasionally an image may be stubborn to move by drag and drop – try cut and paste**

Tables

- **Both Word and Writer can create a simple table of m × n rows inline and allow you to populate the cells of the table with text. Both will also support creating a table from a copy/paste of contiguous cells from an EXCEL or CALC spreadsheet into a document.**

- **Only static cell contents are supported (no functions). Copy from spreadsheet cells with calculated values will transfer the text/numeric value of the cell at the time of copy.**

- **Manipulating rows, columns, cells is more cumbersome in Word or Writer than in a spreadsheet app, so it may be quicker to do any major formatting and sizing of cells on that side before copying from the spreadsheet.**

Frames

- **"Frames" in Writer are sort of like an Inserted "Text Box" in Word in that both can contain a mix of text and images. Frames have more capabilities in Writer than in Word, which means there will be cases that just don't translate.**

  - **There are two examples of frames on the first page of every Bits & Bytes newsletter: the page heading, and the remainder of the first page below the heading.**

  - **Writer allows a frame to have multi-column text like a page, but Word doesn't allow that in a Text Box.**

Frames

- **Word's rendition of that first page from the ODT document is radically different, because everything in the bottom frame is forced into single-column mode – looks bad because it wasn't designed for that. The top frame is also munged around, but that's largely because it didn't have the right font for the title.**

- **I feel confident that with enough work it should be possible to replicate the original layout, but would require a totally different approach to make it work, like making the whole first page and only the first page double column, putting enough blank lines at the top of each column so no text would be lost when overlaid by the heading.**

Other Features

- **There are many other features I don't use regularly enough to compare.**

- **There are many tutorials on Word and Writer and about how to do specific tasks and use specific features.**

- **Both Word and Writer can be used to convert between their formats and other file formats such as HTML (used to define a website page); but there tend to be many more incompatibilities between HTML and ODT or DOCX formats.   The translation may end up with a file that is very difficult to edit for new content.   You can also edit HTML and save as HTML, but over time that can create very ugly HTML code.**

Conclusions

- **Word and Writer have many similar capabilities**

- **There are some things that are simpler in Word, others that may be simpler in Writer**

- **In specialized cases the differences in design between Word and Writer may require different approaches to get the same visual effect**

- **You are probably more likely to encounter a "bug" in LibreOffice, but also more likely to get feature enhancements – bugs can usually be circumvented**

Conclusions – Compatibility

- **Documents created/edited with Word can usually be successfully edited using Writer, and vice versa, but**
  - **There are usually some minor editing corrections needed to get identical appearance which means**
    - **It is practical for a document's editing responsibility to be handed off to someone with the other application where only a one-time conversion is required, but likely not practical for a team working on shared maintenance of the same document to use different word processors and continually re-edit those Word-Writer differences.**
    - **Whenever a hand off to the other word processor is required, a PDF version of the document should also be supplied, and to give the best odds of success hand off an editable form of the document in both ODT and DOCX formats, saving in the native format first.**