

InDesign CS Creative Potential 2: Typography

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A Paradigm Shift in Graphic Design

Pfeiffer Consulting is a research and consulting company with its roots in creative markets. We have been following the creative design and publishing environment for years, since desktop publishing started to revolutionize the way printed documents were produced. In the course of these years, several true paradigm shifts occurred in the way in which creative professionals and designers work. The first one was the arrival of the initial wave of page layout applications. The second occurred when Adobe Illustrator opened up the possibilities of PostScript-based vector illustration, yet another, with the arrival of the first desktop based digital retouching tools such as Adobe Photoshop.

In many respects, InDesign could represent another such paradigm shift: the arrival of a new generation of tools which could profoundly impact the way designers work - and ultimately, the way designs look.

Since the arrival of InDesign, Pfeiffer Consulting has conducted a number of research projects around page layout and design processes, including technology analysis and productivity measures comparing Adobe's page layout software with other design workflows. During this process we realized something surprising. InDesign redefines the way graphic designers can use their page layout tool, and opens up significant creative possibilities; yet many designers are not aware of this potential, or only use the program in a limited way.

Researching Creative Potential

This project was conceived to explore InDesign's creative potential, and it does so through a research-based approach, by analyzing and experimenting some of the thousands of possible combinations of original functionality included in the program. The illustrations included in the research reports have not been created to showcase design; their aim was **to explore new possibilities and to demonstrate unusual combinations.**

In other words, we are not trying to demonstrate different ways of achieving the effects you already use; we are investigating visual structures and design combinations which would be impossible or extremely time consuming to achieve.

All examples in these reports (and of course the reports themselves) were created **using only InDesign, without resorting to additional programs.** From the outset it was clear that key software applications often used in conjunction with page layout software (Adobe Photoshop and Illustrator, for instance) are essential for handling vector illustrations and pixel images; nevertheless, their use tends to slow down the graphic design process if these programs are used as a substitute for missing functionality in the page layout application.

To underscore that point, **we measured the time necessary to achieve a given design or effect. Because in the end, how fast you can achieve something is as important as what you can do.**

Major Findings:

Adobe InDesign CS integrates many design possibilities **which previously required specialized software applications.**

Combinations of functionality such as transparency, complex table designs, expert typography and others **provide strongly increased creative potential.**

In addition to creative potential, **this integration offers a strong increase in productivity** and speeds up the design workflow considerably.

About Pfeiffer Consulting:

Pfeiffer Consulting is an independent technology research institute and consulting operation focused on the needs of **publishing, digital content production, and new media professionals.**

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Understanding the Nature of Graphic Design

Expanding the creative horizon

Whatever we create—be it a global ad-campaign of a simple PowerPoint presentation—the tools we use have a strong impact on our creations. We embrace their potential, we bow to their limitations and integrate them in our way of working. **The tools, their shortcomings and constraints as much as their possibilities, define the shape of our creative work.**

This is particularly true in graphic design. The built-in design possibilities of the page layout application will determine how far a graphic designer can go and what he can do without resorting to additional applications. **This is an important aspect: however powerful programs such as Adobe Photoshop and Illustrator may be, having to use an imaging application to create simple graphic effects is not only disruptive and time consuming, it limits the designer in the scope of things he or she can achieve.** Who would want to use a word processor to correct a typo in a headline?

The logic of graphic design

Let's forget for a second everything we know about computer programs and desktop publishing, and let's look at the graphic design process itself. What is the basic design workflow? How does it work? How important is the integration of tools? What are the levels of excellence required?

Major Points:

Page assembly, graphic design and image work are **different aspects of the creative process** with different needs and requirements.

Integration of design tools with the core page layout environment is essential.

InDesign **expands the basic tool set** for page production in a number of ways.

Assessing the new tools: InDesign extends the possibilities of the page layout environment significantly beyond the possibilities currently available in other applications of the kind, including transparency, expert typography and a complete set of table building tools.

Some of these functionalities, such as high-end composition, should have been part of desktop page layout tools for a long time; others integrate possibilities which used to require a second software application. Yet another group of functions go well beyond the existing page-building paradigms: this is particularly true for nested frames and compound paths, which may not seem spectacular at first but open up enormous design possibilities.

However, the true creative potential stems from the fact that all of these tools are integrated with each other in the standard page layout environment and can be combined in thousands of ways.

Transparency Core Functionality:

- Object transparency
- Soft-edge drop shadows on objects, text, and placed images and graphics
- Feathered edges on objects, text, and placed images and graphics
- Transparency support in Photoshop, Illustrator and PDF files
- Transfer modes for objects, text, and placed images and graphics

Table Design Core Functionality:

- Header and Footer rows (repeating)
- Custom line styles and alternating fills
- Transparency support
- Supported by nested and compound frames
- Content extending over cell borders
- Content cropped by cell borders
- Support for tilted, rotated and sheared tables

Expert Typography:

- Full OpenType support, including automatic replacement of alternate glyphs, discretionary ligatures, old-style figures etc.
- Hanging punctuation
- Hyphenation and justification on paragraph level, with support for horizontal scaling
- Optical kerning
- Nested style sheets

Graphic Design Core Functionality:

- Nested Frames
- Compound paths
- Stroked text
- Gradient on text
- Gradient on strokes and lines
- Custom line styles
- Transfer modes

There are three levels of visual work involved in the majority of graphic design projects: page layout, which usually consists in assembling texts and images created by others; then there is **graphic design** which consists in shaping the graphic identity of the project and elements necessary for it, and finally **image work and illustration**, which consists in creating and applying image retouching and styling effects to selected image elements.

It would only seem logical for the graphic design part to be controlled by the art director in the environment used for the page layout and assembly of elements. **However, since the advent of desktop publishing tools in the late eighties, the limitations of page layout applications have resulted in a shift of design work to programs initially conceived for image and illustration work, such as Photoshop and Illustrator.**

Indeed, the limitations of most widely used page layout tools have shaped the way in which design work is currently practiced. So much so that many professionals do not necessary perceive these limitations any more.

The need for speed—and integration

Anybody who works creatively (and that includes just about anybody who has ever had to produce a document of any kind) has a devouring need for speed. When you are in the process of giving form to a vision, any slowdown can interrupt the creative process, disrupt a stream of ideas, and ultimately make the difference between a masterpiece and a failed attempt which lands in the dustbin (be it physical or digital).

Creativity is thinking about the project, not about the tool. Painters do not think about their brushes when they paint, writers give little thought to the mechanical aspects of their craft—and usually hate it when anything stands in the way of their inspiration. That’s why in computer related work, speed (or more precisely absence of delay) is so important. **What needs to happen needs to happen immediately. Imagine a word processor that would make you wait for each sentence to appear on the screen, or a pencil that would leave a mark a few seconds after you have drawn a line.** Anything which creates a delay or an interruption can have a terrible impact on or work—and if it happens on a repetitive basis, will shape and mould our work in ways we may not even imagine.

Revolutionary combinations

InDesign expands the basic tool set of the page layout environment significantly by adding support for transparency, expert typography and complex tables. These are impressive tools. The ground-breaking aspect of InDesign’s new possibilities, however, lies in their combination and integration. **Taken individually, all of the functionalities provided by InDesign are convenient. Used in combination, they add up to a entirely new tool set.** Transparency is useful, and so are tables. But imagine what you could do by combining them... and imagine the effects you could achieve by adding nested frames... and expert typography...

Methodology: The InDesign Creative Potential Research Project was conducted by Pfeiffer Consulting for Adobe. **The project is based on extensive research, technology analysis and productivity measures.**

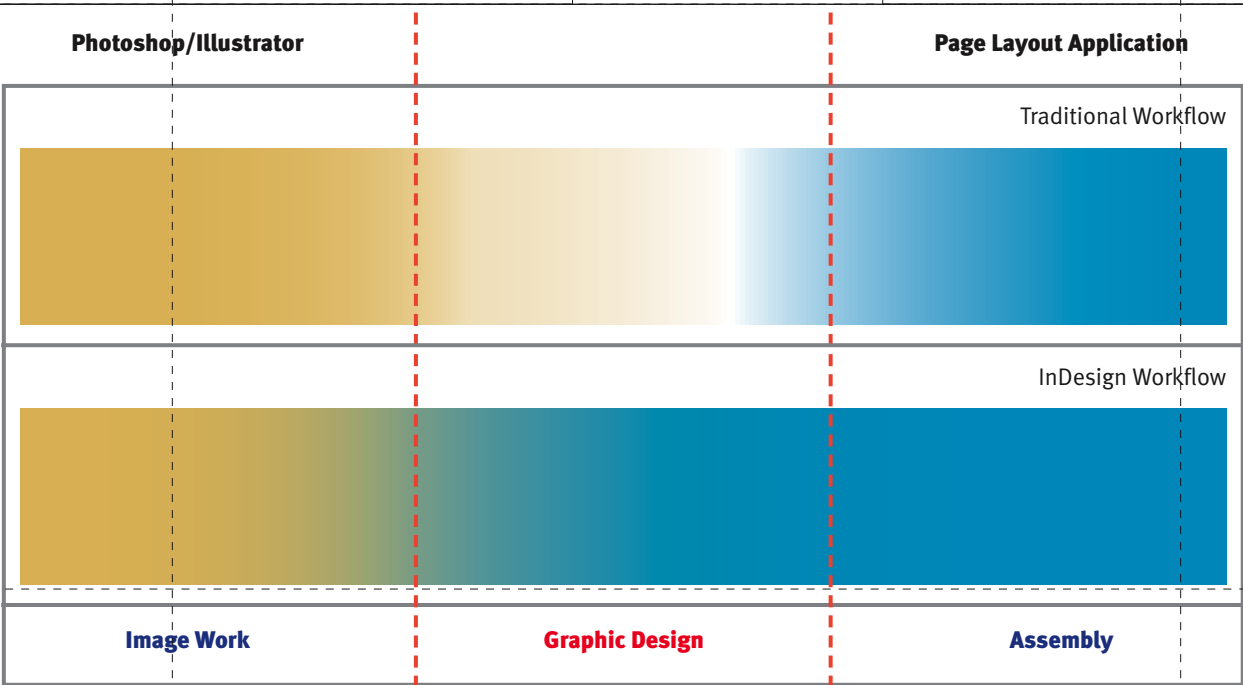
The methodology for analyzing creative potential consisted in **isolating four key areas of functionality which InDesign brings to the market:** Transparency, sophisticated table support, expert typography and new design functionality. We then set out to research **the possible combination between these functionalities and experiment their creative implications.** The main aim of this analysis was not to see how InDesign could change current design practices, but how the software might change the way designers combine certain graphic possibilities.

All design examples in these reports were created using only InDesign, without resorting to additional programs.

Productivity Measures: For each major example, **the necessary time to achieve the design was measured using the standard Pfeiffer Consulting methodology for benchmarking and productivity measures.** To find out more, please visit www.pfeifferreport.com.

In traditional computer design workflows, the page layout tool acts mostly as an aggregator: the program which is used to combine text and graphic elements to produce a page. As soon as a desired effect cannot be achieved within the page layout program, designers need to resort to other applications.

Graphic design, however, is different from image work: while Photoshop and Illustrator are essential tools for creating and manipulating vector illustrations and pixel images, they should not be required for the mainstay of graphic design work, which needs to be carried out within the page design environment to be efficient.



Typography: The Basic Tool Set and its Combinations

Recapturing the power of typography

Few will deny that desktop computer tools have revolutionized print production dramatically. Unfortunately, in the process, typography has also lost some of its traditional sophistication. When the first page layout tools arrived on the market, they were hailed for their ease of use, but not for their typographic sophistication. **Indeed, the majority of current design and publishing workflows can not match the typesetting quality of high end composition systems which were still the norm fifteen or twenty years ago.**

InDesign offers many of the refinements of expert typography. The hyphenation and justification offered by the program is much more sophisticated than in earlier page layout programs: as an example, InDesign allows for hanging punctuation (which moves punctuation signs slightly outside of the main justification to achieve a more regular text alignment.)

Another very important aspect is support for OpenType fonts containing a larger glyph set. This means that the program can for example automatically substitute a variety of two- and three glyph ligatures, use alternate or swash characters without any need for manual substitution of glyphs, or set proper fractions easily.

These possibilities are extended and enhanced by their integration with the general page layout and design environment. This implies that they can be used in many different ways: in conjunction with transparency effects, enhanced with gradient fills, or combined with nested and compound frames.

Major Points:

InDesign offers support for **an extensive range of typographic options** previously unavailable in mainstream page layout software.

This provides designers with **high-quality typesetting without the need for extensive manual fine-tuning.**

More importantly, these typographic features **can be integrated with a host of creative options without transforming the type into an illustration** and losing the editability of the type in the page layout.

That's wonderful—but will it print?

The history of computer based publishing is lined with ground-breaking innovations which could bring the sturdiest image setter to its knees if used without proper considerations: in earlier versions of Illustrator gradients could cause havoc at output time, and even pixel images had their fair share of problems. Innovation requires experience and learning, and this process repeats itself whenever we venture into something new.

Adobe InDesign pushes the envelope in terms of graphics capabilities, and that means that some adaptation of our production reflexes is in order. When using a modern PDF based workflow, the risks for problems are relatively minimal: the latest iterations of the PDF file format (1.4 and 1.5) were designed to handle

transparency, and Postscript Level 3 devices in general should be able to handle this feature. Older versions of the Postscript can be more problematic: Since PostScript has not been conceived initially to handle transparency, this capability (and features related to it such as drop shadows or feathered edges) can become a problem when used on older image setters.

The most important aspect when outputting to such a device is to pay attention to transparency flattening, a technique which basically renders transparent objects before output. In any case, with proper preparation, there should not be any insurmountable problems: a growing number of high-profile publications around the globe routinely use InDesign in production.

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Basic creative possibilities and combinations with other tools or functions

Paragraph-based H&J with automatic glyph-scaling

Mr. Sherlock Holmes, who was usually very late in the mornings, save upon those not infrequent occasions when he was up all night, was seated at the breakfast table. I stood upon the hearth-rug and picked up the stick which our visitor had left behind him the night before. It was a fine, thick piece of wood, bulbous-headed, of the sort which is known as a "Penang lawyer." Just under the head was a broad silver band

OpenType support: alternate glyphs

Nantuo
Nantuo

Typeset text with transparency

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Text with feathered edge

Nantuo
Nantuo

Hanging punctuation

who was usually very late
upon those not infrequent
s up all night, was seated
I stood upon the hearth-
tick which our visitor had
ght before. It was a fine,
lbous-headed, of the sort
enang lawyer." Just under
ilver band nearly an inch
rimer. M.R.C.S. from

"How did you know what
you have eyes in the back
"I have, at least, a well-
coffee-pot in front of me,
Watson, what do you make
Since we have been so u
him and have no notion
dental souvenir becomes
hear you reconstruct the
of it"

OpenType support: fractions

19 3/4,

Typeset text with gradient fill

who was usually very late
upon those not infrequent
up all night, was seated
I stood upon the hearth-
tick which our visitor had
Watson, what do you make
Since we have been so u
him and have no notion
dental souvenir becomes
hear you reconstruct the
of it"

Stroke text and drop shadow

19 3/4,

Typography: Design Combinations in Standard Applications

Designing with type

For the casual observer, it might seem as if the usual design and publishing tools offer every creative option a typographer might want—and then some. This seems to be corroborated by research: in surveys about perceived needs by creative professionals conducted by Pfeiffer Consulting, a majority of designers declared that they had all the tools they needed. It seemed therefore safe to assume that nothing major had been left out.

This impression changes, however, when one analyzes design functionality which InDesign brings to the market. **In fact, the program provides some very fundamental extensions of the basic page-building paradigms.** We have already discussed some of the expert typographic capabilities the program offers (See page 4). But even in terms of graphic design InDesign expands creative possibilities linked to type.

Cropping text and graphics

What are the basic options most page layout programs offer for creating a design? We can create frames or boxes of varied sizes and shapes, fill these objects with text and images, and add strokes and colored backgrounds. We can set text on a path, or convert it to an outline. **What we can not do in most page layout programs, however, is crop a frame or a piece of text.** Which is surprising: since the beginning of graphic design, cutting out and cropping headlines and graphics has been an essential design technique.

This limitation is particularly imposing when working with display type: any creative work with text should happen in an environment where text can be edited and modified. Creating for instance a headline in Illustrator or Photoshop is complex and slows down the creative process considerably—especially if creative experimentation in the overall page design is an essential part of the process.

Nested frames and compound objects are one of the most important innovations InDesign has brought to the design and publishing workflow. The possibility to take an existing headline or graphic element and paste it inside another frame or group of objects is both very simple and extremely powerful. **This report itself is a strong illustration of these possibilities: none of the examples which are presented here are created in another application; all of them are “live” designs which can be edited, modified and even searched if required.**

The creative possibilities which are linked to these new design paradigms are practically endless, since they can be combined with virtually any other design and typesetting functionality available in the program. The examples shown on the next few pages may provide some sense of the possibilities—but they barely scratch the surface of the inherent design potential.

Major Findings:

InDesign **expands existing page layout and design paradigms** through the addition of nested frames and compound objects.

Pasting a headline inside an existing frame allows the designer to crop the type in a variety of ways.

These possibilities **considerably expand the creative potential** of the page layout and design environment.

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Time necessary to execute this composition starting from text on paths: **0 min. 29 sec.**

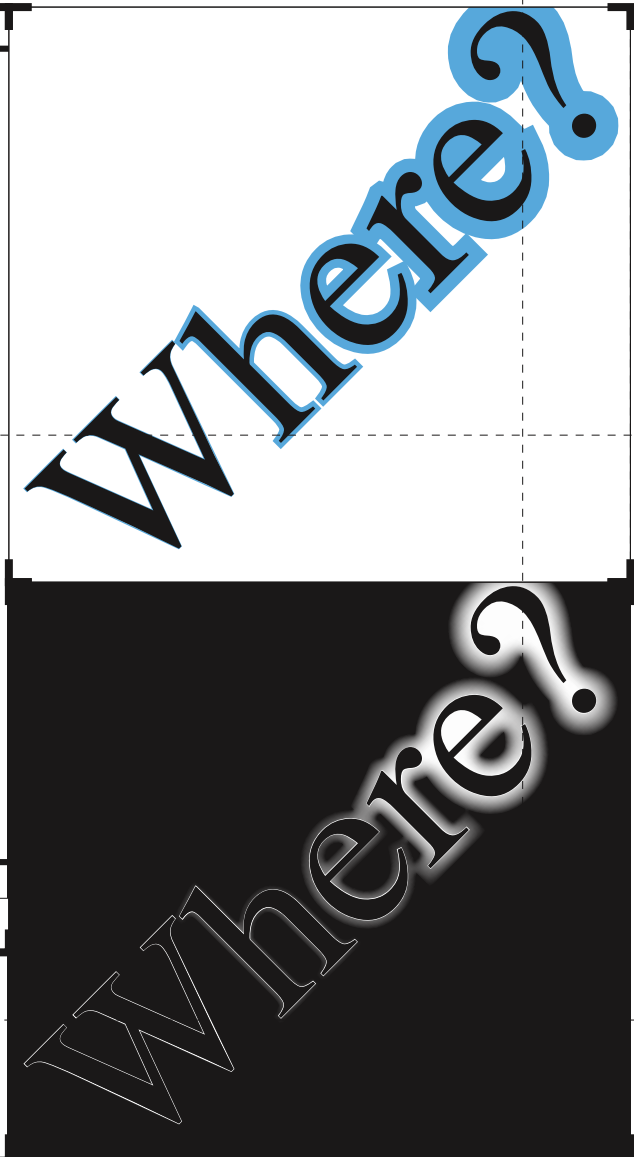
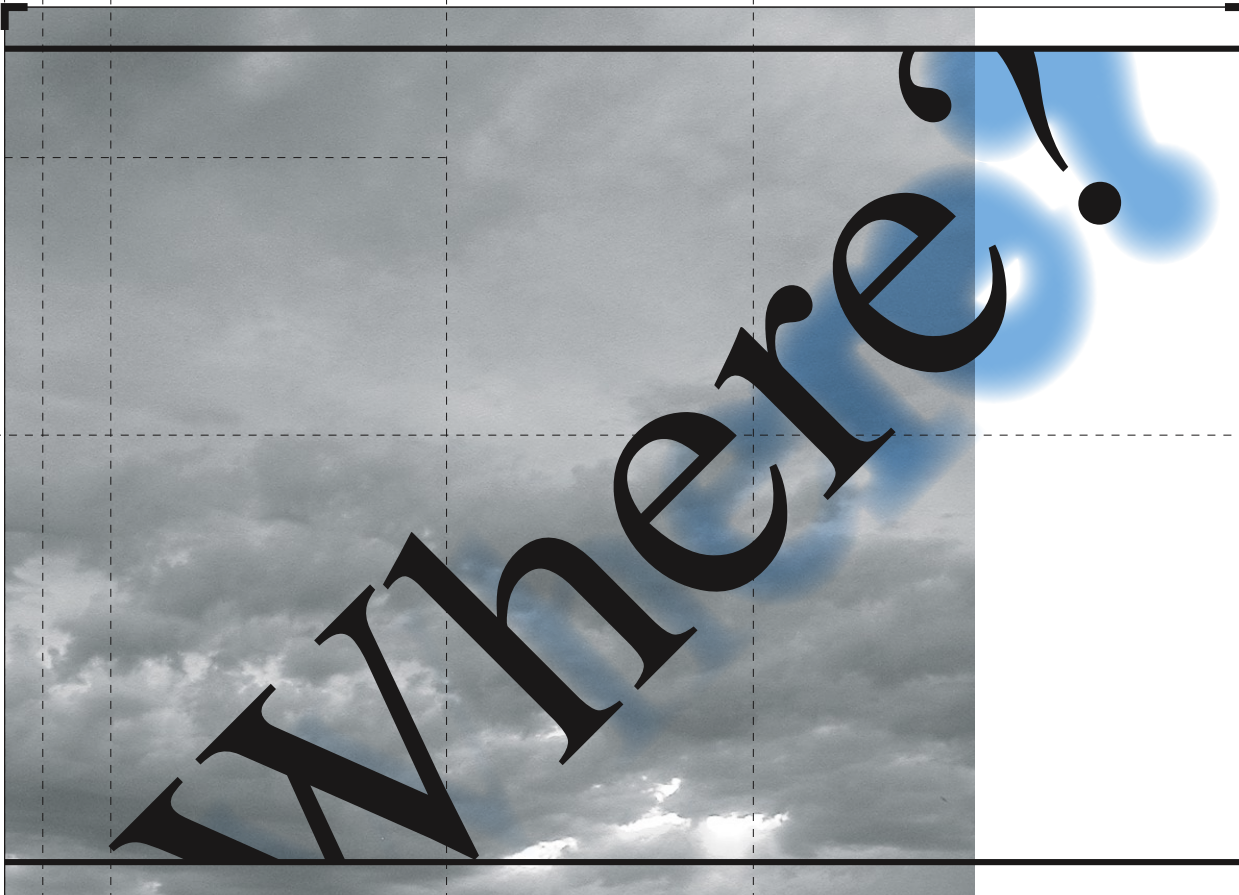
Curiouser and curiouser! cried Alice (she was so much surprised, that for the moment she quite forgot how to speak good English). 'Now I'm opening out like the largest telescope that ever was! Good-bye, feet!' (for when she looked down at them she found that they were vanishing into air like the largest telescope that ever was!)

Curiouser and curiouser! cried Alice (she was so much surprised, that for the moment she quite forgot how to speak good English). 'Now I'm opening out like the largest telescope that ever was! Good-bye, feet!' (for when she looked down at them she found that they were vanishing into air like the largest telescope that ever was!)

This example uses a standard design technique—text on path—in conjunction with layering and nested frames. Once the main text is formatted, the objects are grouped and copied to the clipboard. A rectangle is drawn where the focused text is

to appear, and the text objects are pasted inside this object (which could of course be of any other shape, or composed of several frames combined in a compound object.) Finally, the original text objects are selected, and a feathering effect is applied.

Curiouser and curiouser! cried Alice (she was so much surprised, that for the moment she quite forgot how to speak good English). 'Now I'm opening out like the largest telescope that ever was! Good-bye, feet!' (for when she looked down at them she found that they were vanishing into air like the largest telescope that ever was!)



Time necessary to execute this composition starting from rotated headline: **1 min. 21 sec.**

This typographic effect does not use the built-in drop-shadow capability available in InDesign, but rather uses a duplicate of the main title, combined with feathered edges. This makes it possible to use it in combination with a stroked outline, which is increased

for each individual letter. This in turn allows for a number of other interesting combinations which in most design workflows would have required an illustration software to achieve. A transfer effect is used to make the shadow blend with the background picture.

Typography: Design Combinations in Extreme Applications

Mastering the combinations

Type is certainly the area where InDesign’s capabilities for creating rich visual structures show the most important creative potential. This capacity brings back some of the design techniques which were very common in the days before the computer took over as the central piece in the designer’s toolbox: when manual paste-up was still the norm, it was relatively easy to slice text—quite literally—in a variety of ways, an operation completely impossible in computer-based page layout before InDesign. But the program pushes these possibilities even further, by allowing them to be combined with purely digital effects such as transparency, drop shadows etc.

Knowing one’s place

Sometimes simple options can make an enormous difference. In most graphics applications, when the user pastes an element, it is placed at the center of the page, ready to be moved to wherever the designer wants it to go. InDesign is no different in that respect as long as one performs a straightforward paste operation—but the program also offers **the possibility to paste an element at the exact location where it was copied**. This is extremely handy when transferring elements between pages or documents, and it gives their power to compound and nested frames.

The basic principles of nested frames are simple enough: any element or group can be pasted inside any frame (or group of frames, provided they have been transformed into a compound path by using the menu command of the same name.) The resulting object can itself be grouped with other elements, and in turn be pasted into another frame, and so forth. Navigating the resulting hierarchy of frames is surprisingly simple, using either icons on the control palette, or custom keyboard shortcuts which can be assigned to the different commands.

In fact, once one has mastered the basic principles of nested frames, their use becomes quite addictive—and it also has a very stimulating effect on creative ideas. The following page shows an example which combines several design possibilities using these techniques and their combination with other tools.

It is true that technically speaking these designs could have been created in Photoshop or Illustrator, but certainly in no other mainstream page layout program. And it is precisely the integration of these design possibilities with the page layout environment should make them very stimulating for graphic designers. **There is a fair chance that in terms of designing with type, there will be a “before” and “after InDesign”.**

Major Points:

InDesign provides **strong creative potential for designing with type**.

Nested frames and compound paths, combined with other creative options such as transparency, open up **design possibilities which are impossible to achieve in other mainstream page layout applications**.

It is likely that over time, InDesign’s options for graphic design and page layout **will have a strong impact on design practices**.

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Time necessary to execute this composition starting from a formatted headline: **1 min. 22 sec.**

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The Split
Personalities
of Rowan
Parker

The Split
Personalities
of Rowan
Parker

The Split
Personalities
of Rowan
Parker

The first step in creating this example consists in creating the basic type arrangement for the headline. Once this has been fine-tuned, the individual text frames are grouped and copied to the clipboard. Next,

four frames, corresponding to the four sections of the headline are drawn, and the grouped type is pasted inside each individual frame. Finally, the content of each section is shifted slightly to achieve the desired effect.

Typography: Can You Automate Excellence ?

Pushing the Envelope of computer-based typography

Since many of the design examples in this report feature type in the context of creative design, it seemed only appropriate to also include an example which relies purely on the automated typesetting capabilities of InDesign, without using any manual fine-tuning or forced hyphenation. While the example on the next page may seem straightforward, it would be very complex or even impossible to produce on previous page layout applications.

In fact, simple as it may seem, these paragraphs draws on many of the InDesign's typographic refinements. OpenType support shows up in contextual alternates (the “N” in November or the “M” in Moon), discretionary ligatures (“ct” and “st” for instance) as well as old-style figures. **Hanging punctuation contributes to a more evenly aligned border of the justification.** Last but not least the composition engine itself, which supports horizontal scaling as part of the composition algorithm, produces a very evenly spaced text, despite extremely short lines.

Finally it is important to point out that practically all of these parameters (with the exception of hanging punctuation) can be included in style sheets. InDesign CS also introduces nested styles to help streamline complex formatting options. This option, which can be accessed from the paragraph style sheet dialog box, allows the local use of character style sheets according to certain rules. In this case, InDesign applies a local style sheet to the first letter (the drop cap in Edwardian Script), followed by another style sheet which stops after the second comma. In the same fashion, a special style could be applied to any number, and yet another which would start after the first colon.

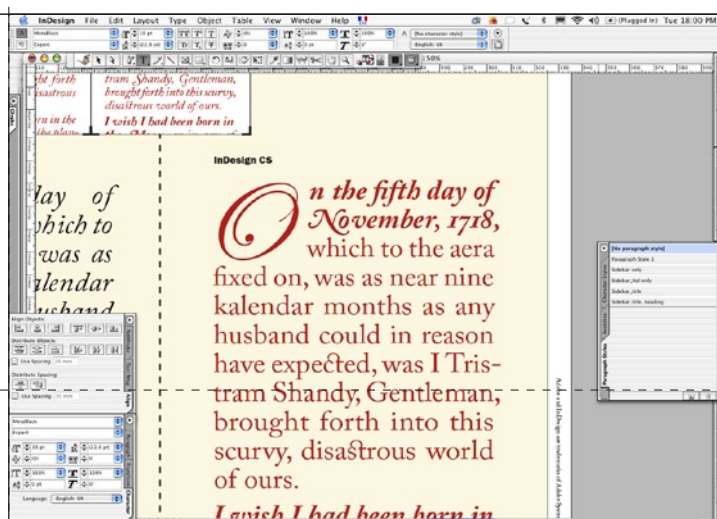
Major Points:

InDesign's composition engine supports a number of **typographic features previously unavailable** in page layout applications.

OpenType support
~~automates the use of~~
~~extended glyph sets~~
 for expert typography

Nested styles can help **streamlining complex formatting operations.**

About the design



Technical aspects:

To achieve the typeset text on the next page, several automated composition features were used. The InDesign Paragraph Composer, hanging punctuation, optical kerning, as well as a variety of OpenType features such as old style numerals, contextual alternates for swash characters and discretionary ligatures all contribute to the typographic sophistication.

Time required:

0 min. 12 sec.
(Using style sheets)

1 min. 27 sec.
(Using only manual formatting)

**No manual hyphenation
was used to fine tune the
appearance of the typeset text**

On the fifth day of November, 1718, which to the aera fixed on, was as near nine kalendar months as any husband could in reason have expected, was I Tristram Shandy, Gentleman, brought forth into this scurvy, disastrous world of ours.

I wish I had been born in the Moon, or in any of the planets, (except Jupiter or Saturn, because I never could bear cold weather) for it could not well have fared worse with me in any of them (though I will not answer for Venus) than it has in

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I wish I had been born in the Moon, or in any of the planets, (except Jupiter or Saturn, because I never could bear cold weather) for it could not well have fared worse with me in any of them (though I will not answer for Venus) than it has in this vile, dirty planet of ours, which, o' my

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I wish I had been born

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I wish I had been born in

Colophon:

This report was created entirely with InDesign CS.

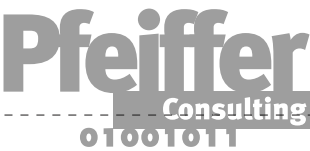
No other software was used to create any of the illustrations and examples used in this publication; all designs featured in these pages were used as live design elements, pasted inside a frame for positioning and cropping.

Designs and Illustrations:
Eileen Brunswick and Laszlo Nahar.

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