13 Applying Strokes to Paths

Chapter 12 covers only half the story about how you can flesh out a visual idea by using CorelDRAW. Although an object can usually live its life just fine without an outline, the attributes you can apply to a path can add a touch of refinement to an illustration. The right outline color can visually separate different objects. Additionally, you can simulate calligraphic strokes without using Artistic Media when you know the options on the Object Properties docker. You can even make a path a dashed line, complete with arrowheads for fancy presentations and elegant maps. In fact, an outline, especially an open outline, can live its life in your work just fine without defining a filled object. You don't have to draw the line with fills and effects in your CorelDRAW artwork. This chapter shows you the ins and outs of properties you apply to your paths, from beginning to end.

Download and extract all the files from the Chapter13.zip archive to follow the tutorials in this chapter.

Applying Outline Pen Properties

By default, when you create an open or closed path, it's given a 0.5 point width in black (and this has been known to change from version to version), with mitered (90° angle) corners, square line caps, and no fancy extras. Part of the rationale for this default is that vector paths can't really be seen without some sort of width. In contrast, bitmap artwork, by definition, is made up of pixels, written to screen and file; so when a user draws an outline, it always has a width (it's always visible). Happily, vector drawing programs can display a wide range of path properties, and unlike with bitmap outlines, you can change your mind at any time and easily alter the property of an outline.

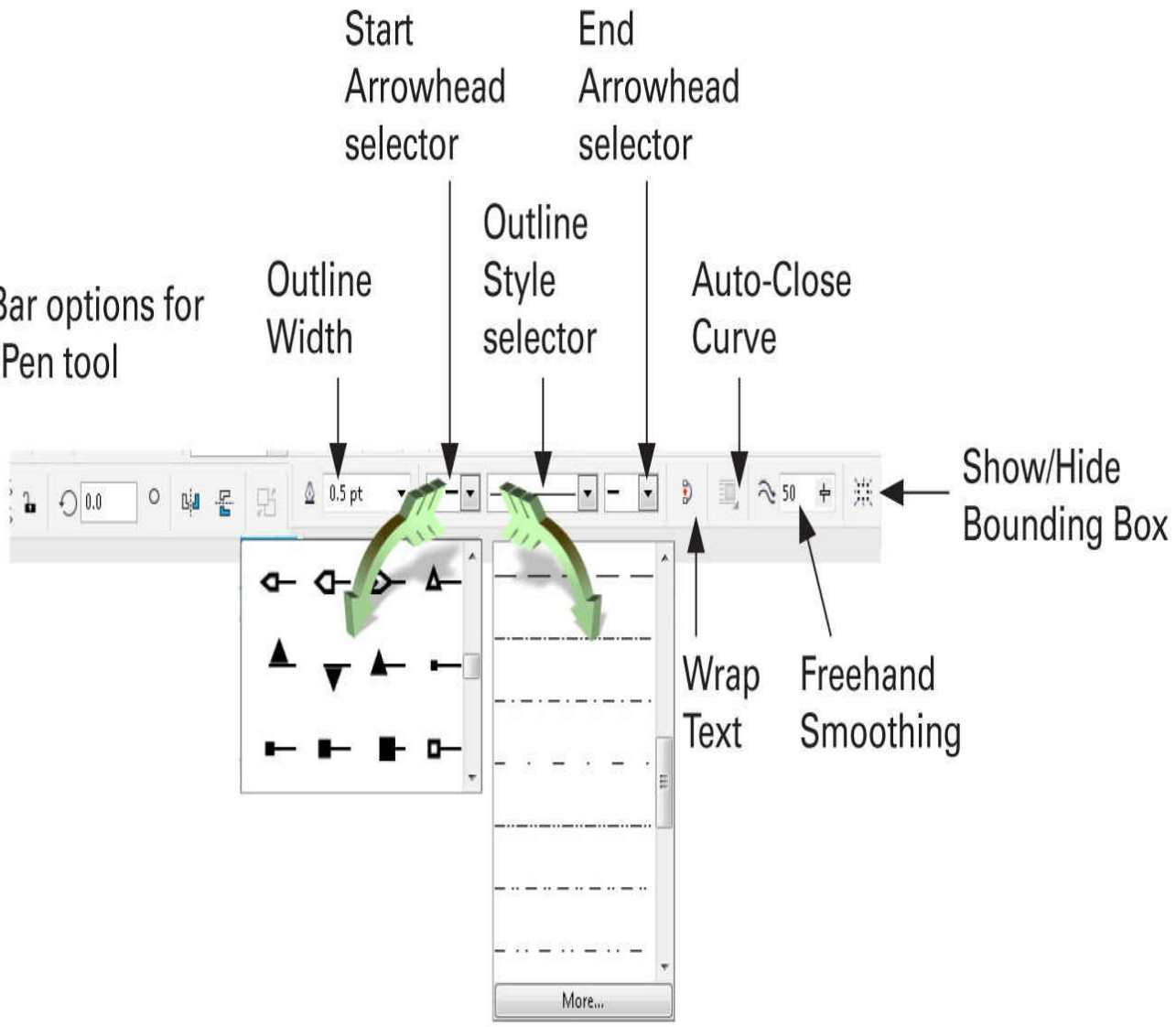
In CorelDRAW, you can apply properties such as color, stroke width, and other fun stuff to an open or closed path (and even to open paths that don't touch each other but have been unified using the Object| Combine command). The following sections explore your options and point out the smartest and most convenient way to travel in the document window to

arrive quickly at the perfect outline. When an open path or an object (which necessarily has to be described using a path) is selected on the page, the Property Bar offers many options for outline properties. You can also dig into the Outline Pen dialog, now accessed by double-clicking the Outline box on the Status Bar; there is no longer any Toolbox button for this dialog. And you also have the Object Properties docker, accessed from the pop-up menu when you right-click a path; ALT-ENTER also gets you there. Some shortcuts for performing simple property adjustments are covered on the long and winding path through this chapter.

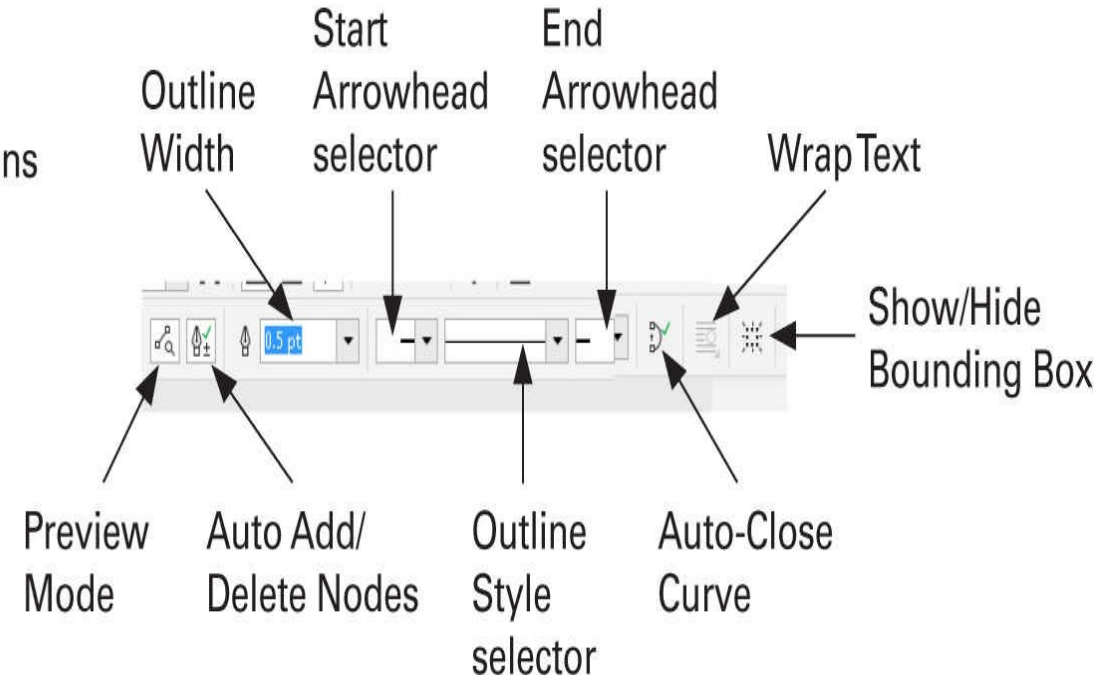
Outline Pen Options and the Property Bar

Although it doesn't offer *all* options for path properties, the Property Bar is probably the most convenient route to the most often-needed outline properties. It actively displays a selected path's *current* properties, which you can change when a path is selected and the current drawing tool is still active. Some options are persistent and are available when you choose a drawing tool but have not drawn a path yet, such as the Outline Width box. The Property Bar—shown here for the Freehand Pen tool at the top and the Pen tool at the bottom—offers outline width, style, and arrowhead options. You can make an open path with a head, tail, two heads—it's up to you. Other options give you control over wrapping text around a path, showing or hiding a bounding box around a path, and items not directly related to the outline's look. Closed paths, naturally, can't have arrowheads, but your options for dashed lines and other attributes are available for rectangles, ellipses, all the polygon shapes, and for freeform closed curves you've drawn by hand. You can see that when using the Pen tool, you have two tool-specific options: Preview mode and the capability to use the tool to add or remove nodes along the path you're drawing. The Freehand tool doesn't have these options, but it does offer the Auto-Smoothing option, which the Pen tool does not (because it is irrelevant).

Property Bar options for Freehand Pen tool



Property Bar options for Pen tool



In the following tutorial, you'll use the Property Bar when you draw a path.

Going Long and Wide

Tutorial

1. Choose any drawing tool—the default Freehand Pen tool is fine—and just drag a squiggle and then press SPACEBAR to switch to the Pick tool; the path is selected now.
2. On the Property Bar, choose an outline thickness using the Outline Width selector, or enter a value and then press ENTER. If you're zoomed out of the drawing page, try choosing 8 points or greater so it's easier to see the effects in the following steps.
3. For arrowheads (on an open path), click the Start or End Arrowhead selectors, and then choose an arrowhead style from the pop-up. The Start option applies an arrowhead to the first node of the path; the End option applies it to the most recently created. However, this might not be the direction in which you want the arrow to point. If this is the case, you have to perform a little mental juggling; the head of your arrow will be the *last* node on a path you create, not the first.

Tip You can reverse the direction of an open path by choosing the Shape tool (F10), right-clicking over any of the path segments, and then choosing Reverse Subpaths from the contextual pop-up menu.

4. To apply a dashed- or dotted-line pattern to the path, click the Outline Style selector and then choose from one of the presets. Creating custom dashed patterns is covered later in this chapter.
5. Try increasing and decreasing the outline width, and see what happens to dashed-line styles and arrowheads; they scale proportionately to the width of the outline.

As you apply outline properties from the Property Bar to your object or path, the effect is immediately visible, making this method both quick and convenient to use.

Tip To set the color of a shape's outline quickly, right-click over any color palette swatch.

Outline Tool Features on the Object Properties Docker

You can define a path's properties by accessing three levels of features: The Property Bar is always available when you select a line, providing basic outline attributes. The Object Properties docker has taken over most of the duties from your third option, the Outline Pen dialog (formerly the Outline tool). The redesigned Object Properties docker can modify virtually everything about a drawn line except editing the path itself (covered in Chapters 7 and 9). These features, shown in Figure 13-1, are covered in the following sections.

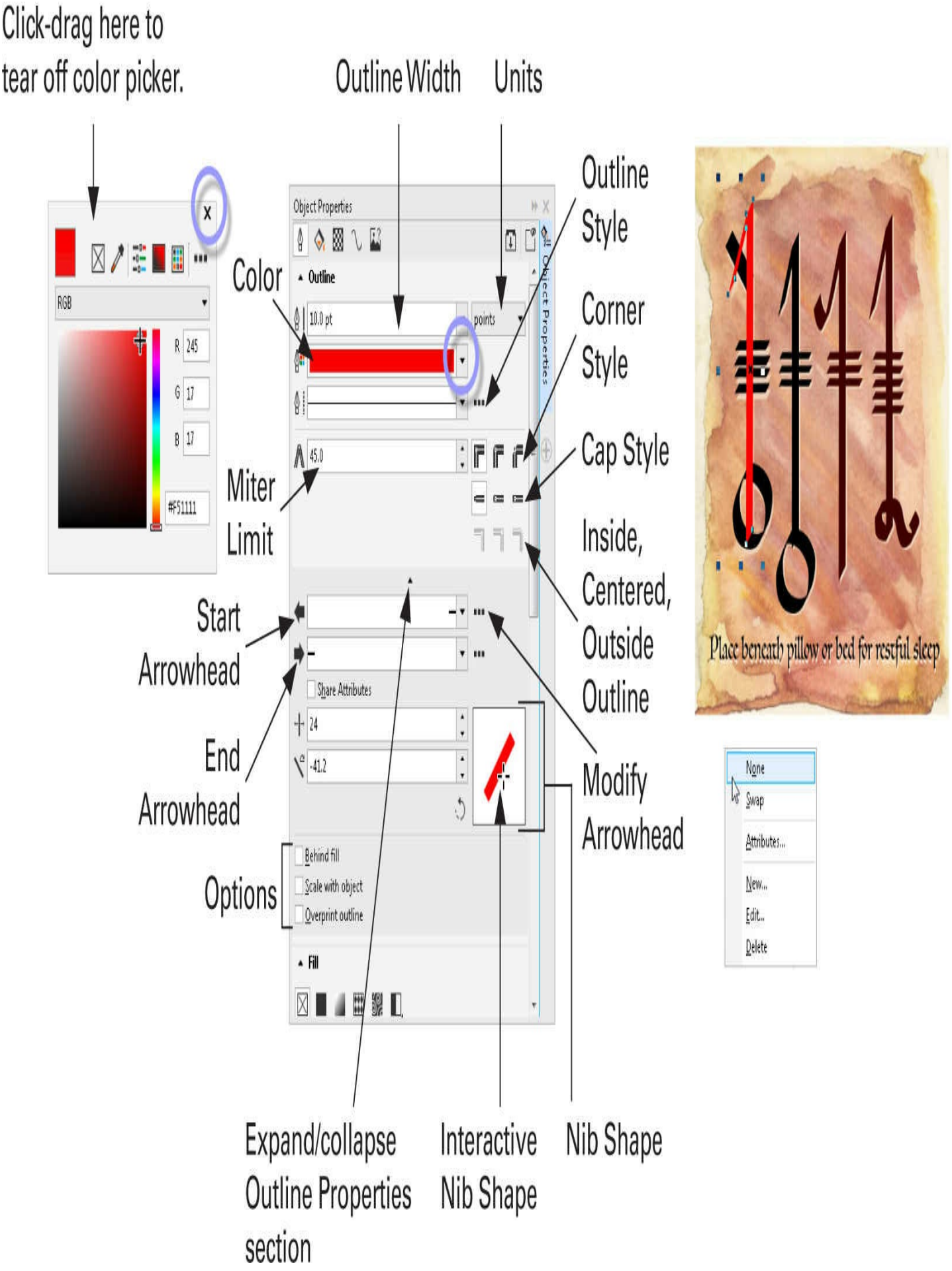

Click-drag here to tear off color picker.
Outline Width
Units
Outline Style
Color
Corner Style
Cap Style
Miter Limit
Inside, Centered, Outside Outline
Start Arrowhead
End Arrowhead
Modify Arrowhead
Options
Expand/collapse Outline Properties section
Interactive Nib Shape
Nib Shape
Object Properties
Outline
10.0 pt
points
45.0
Share Attributes
24
-41.2
Behind fill
Scale with object
Overprint outline
Fill
RGB
R 245
G 17
B 17
#F51111
Place beneath pillow or bed for restful sleep
None
Swap
Attributes...
New...
Edit...
Delete

FIGURE 13-1 **You have complete control over how an outline looks when you use the Object Properties docker.**

Tip In various areas on CorelDRAW X8, you'll discover that you can tear a color picker off a dialog after clicking the expand button in the dialog. This is true of Outline Properties' Color picker, and you might want to do this if the screen is getting too crowded or too bunched up in an area where you need to see things. The torn-off picker will disappear and return to its normal position if you click outside of the picker. Just drag at the top of the picker, to the left of the close X icon.

To display the Outline section of the Object Properties docker, right-click over a selected outline on a page or press ALT-ENTER. Make sure the docker is fully extended so you can see all the outline properties.

Exploring the Outline Pen Features

The Object Properties docker is virtually your one-stop shop for modifying all attributes of a selected path, whether open or closed. Although some of the options for path outlines on the Object Properties docker are self-explanatory, even with Tooltips turned on, other features in DRAW might not strike you immediately as useful. Therefore, a survey is in order, as follows.

Draw a *closed* path (you'll see why in a while) with the tool of your preference. As soon as it's drawn, you can right-click over it with your current drawing tool, and then choose Object Properties on the contextual pop-up menu. This pop-up toggles the visibility of the Object Properties docker, so don't accidentally move to a different page and right-click because it will toggle to *removing* visibility. This can be a source of confusion, so either bookmark this passage or remember it.

Setting Outline Color

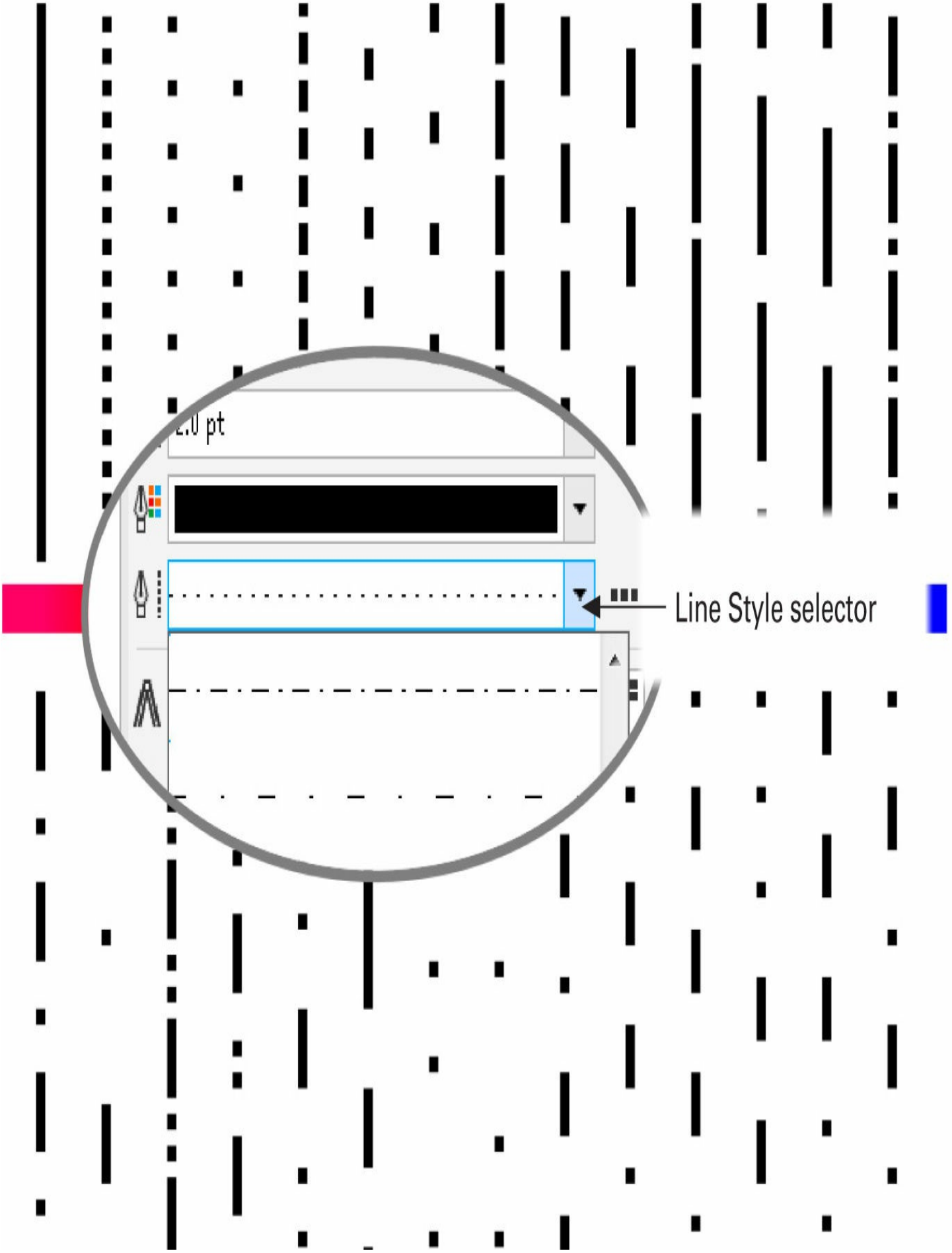
The Outline Color mini flyout on the Object Properties docker affects only the color of the object's path; object *fills* are not changed. Outline color can be set only to CorelDRAW's Uniform colors from the drop-down palette. To access *every* color collection and color model for outlines, click the wide swatch to drop the color models down, and then work in the Color Mixer, Model, and Palettes tabs. You can also click the ellipses (…) button (which indicates more options) and choose from a specific color collection, such as

PANTONE process colors. The Outline Color Properties features are nearly identical to the ones you use for fills, as covered in Chapter 12.

If you want color control and don't need to fuss with dashed outlines, arrowheads, or other outline attributes, don't choose Object Properties. Instead, right-click a color well on the color palette to set an outline color.

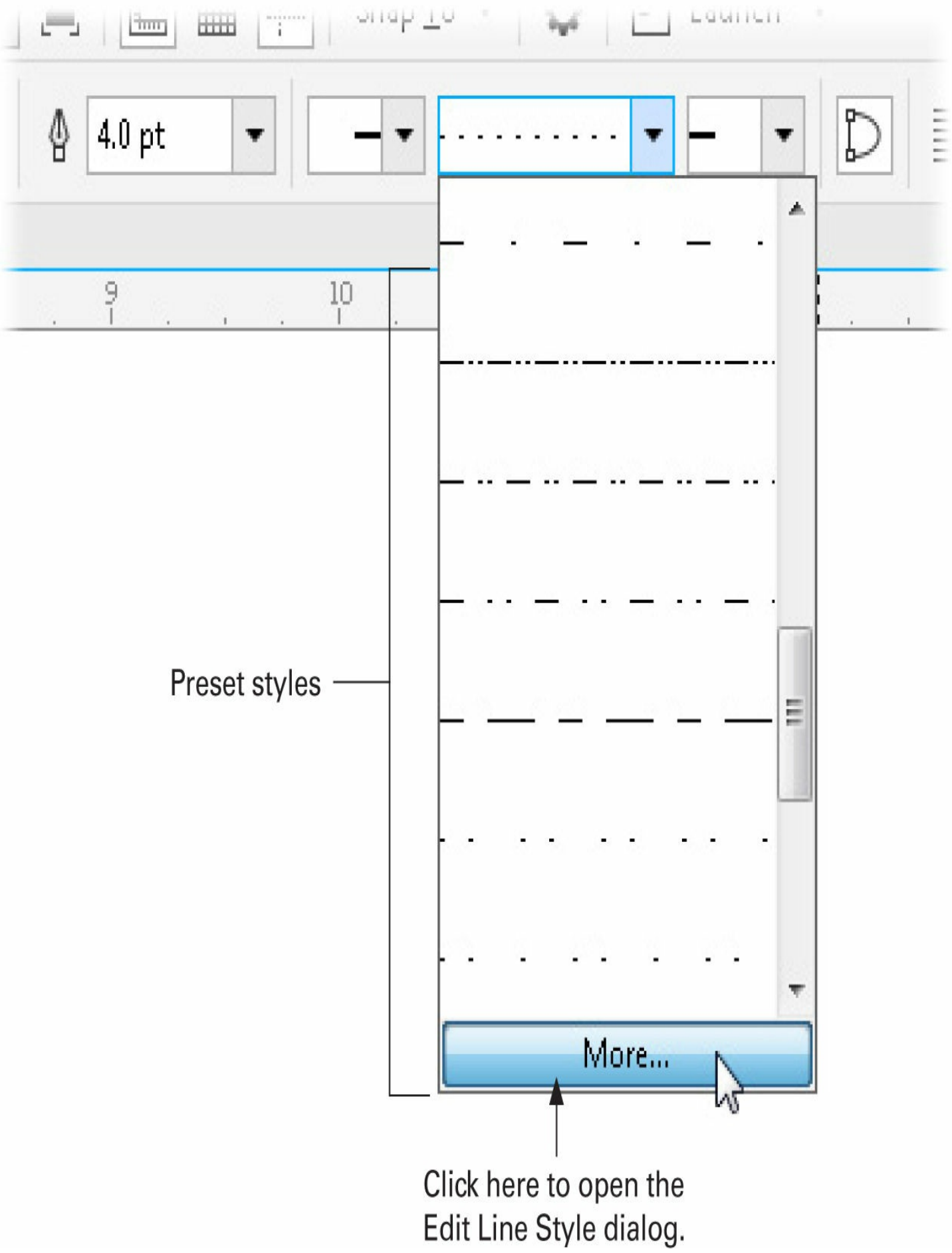
Choosing Outline Styles

For a quick way to apply a dashed- or dotted-line pattern to the path of a selected object, use the Line Style selector, which offers 28 different preset variations.


2.0 pt
Line Style selector

Applying an outline style causes a pattern to appear along the entire path, which is a must for anything you need to suggest visually to readers—for instance, that they should go running for the scissors to cut out coupons, tickets, you name it. *Styles* are repeating patterns of short, long, and combinations of dashes that apply to the entire path. Line styles can be applied to any open- or closed-path object, as well as to *compound paths*—such as a donut object or an *O*. The quickest way to apply a dashed-line style is to use the Pick tool and the Property Bar's Outline Style selector when one or more paths are selected, as shown here.

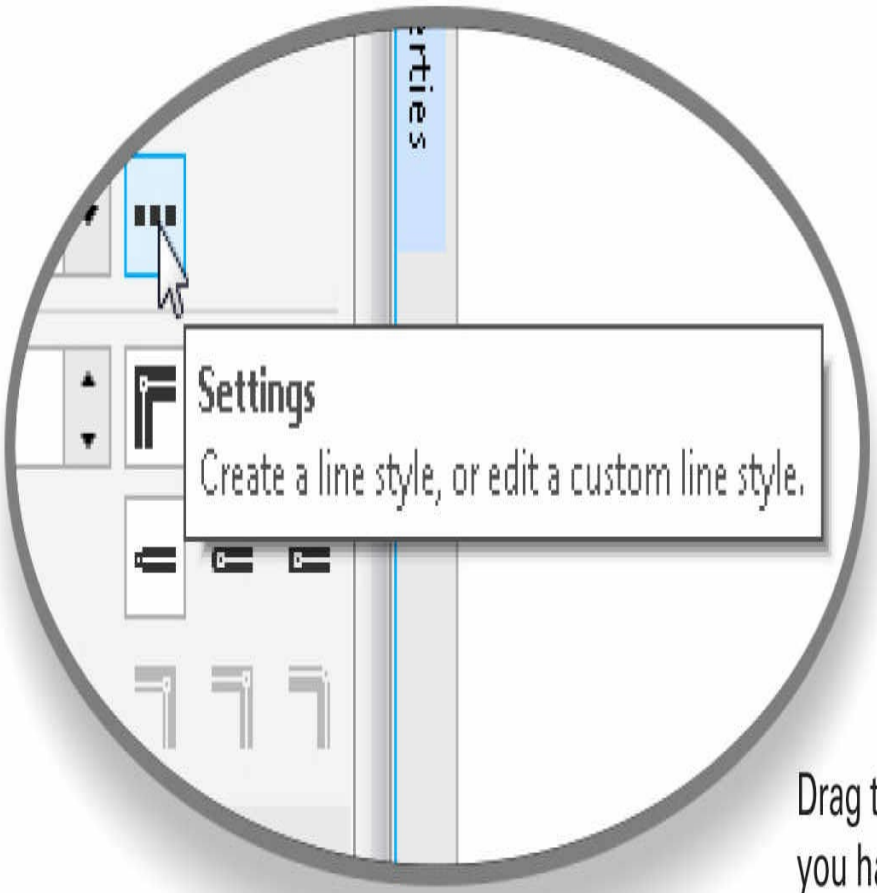
Note Circles, rectangles, and polygons do not show the Outline Style selector on the Property Bar. Happily, you can press ALT-ENTER and edit the properties of these objects using the Object Properties docker.


4.0 pt
9
10
Preset styles
More...
Click here to open the
Edit Line Style dialog.

Tip Once you have a nice custom outline set of properties defined and want to apply all the parameters to a different path, you can copy outline properties from one path to another by right-clicking and dragging one path on top of the target path (this doesn't move your original path; it's a special editing technique). Release the mouse button when a crosshairs cursor appears over the target path. Then choose Copy Outline Here from the pop-up menu.

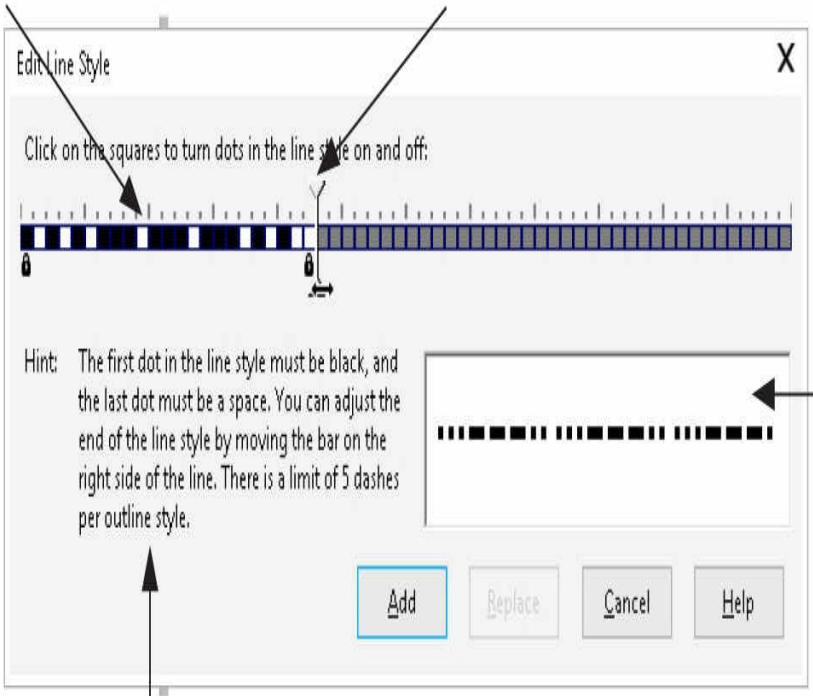
Creating and Editing Outline Styles

If you're looking for a special dashed-line style (one of your own invention), you can always *build* it. Click the Settings icon directly to the right of the Style selector in the Object Properties docker while an unfilled line or object with a outline width is selected to open the Edit Line Style dialog, shown here.



Drag to the right to begin. After you have a pattern, increase the blank space between pattern dots/ dashes by dragging left or right.

Click to draw or erase part of the dot/dash pattern.

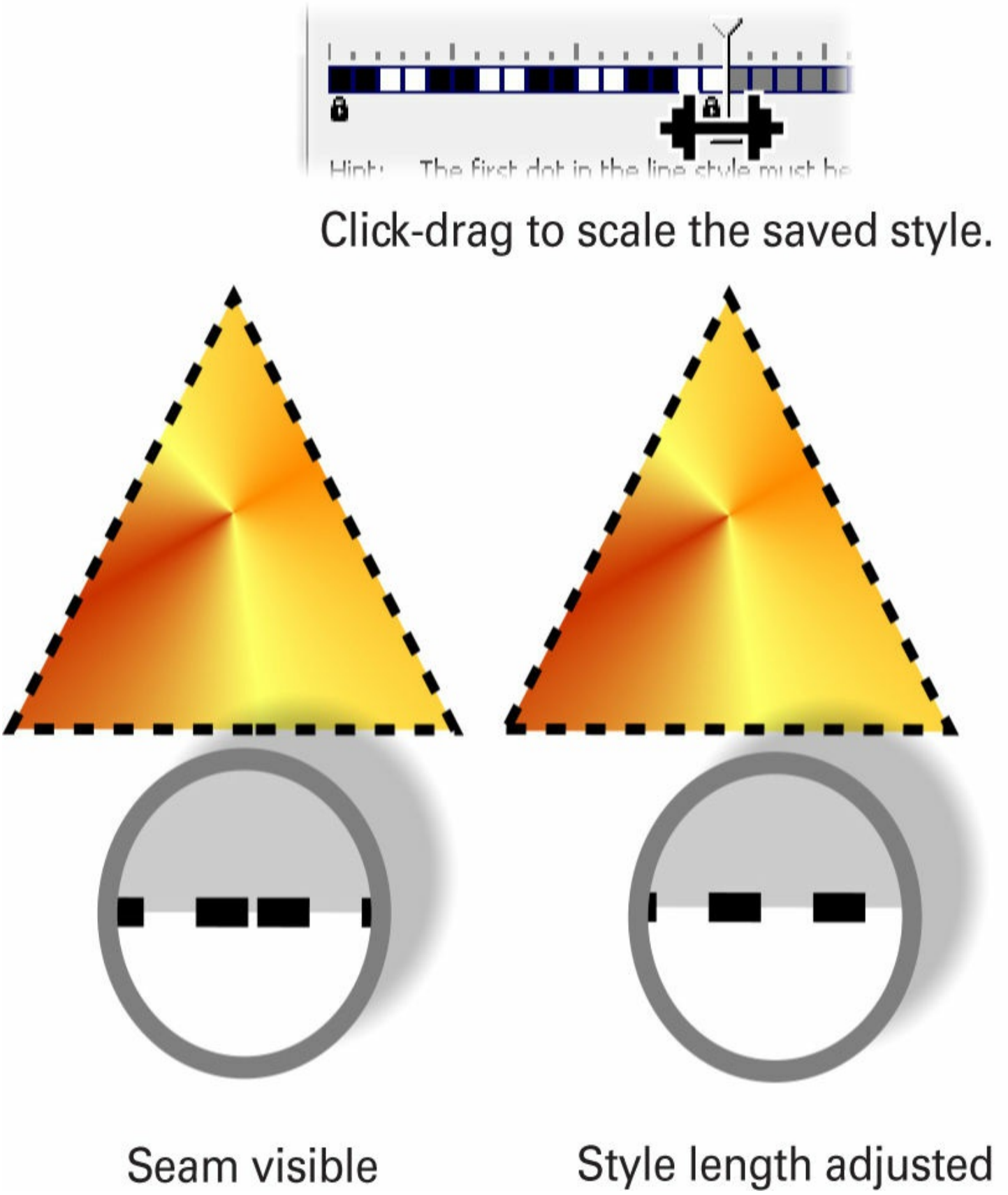


Preview window

Five-dash limit!

Creating a custom line style of dots and dashes is a fairly intuitive process, very similar to drawing a line in a paint program; your cursor serves as both a pencil and an eraser—click a black dot to erase it, click a white (space) dot to add to or begin a line. If you practice a little care and patience, you can also click-drag to draw and erase multiple dashes or dots. Once you save a style by clicking Add, it becomes available throughout CorelDRAW wherever outline styles are offered. Your only limitation—*read the legend at the bottom left of the editor*—is that you can't create a sequence consisting of more than five dashes or dots; adjoining marks count as a single dash.

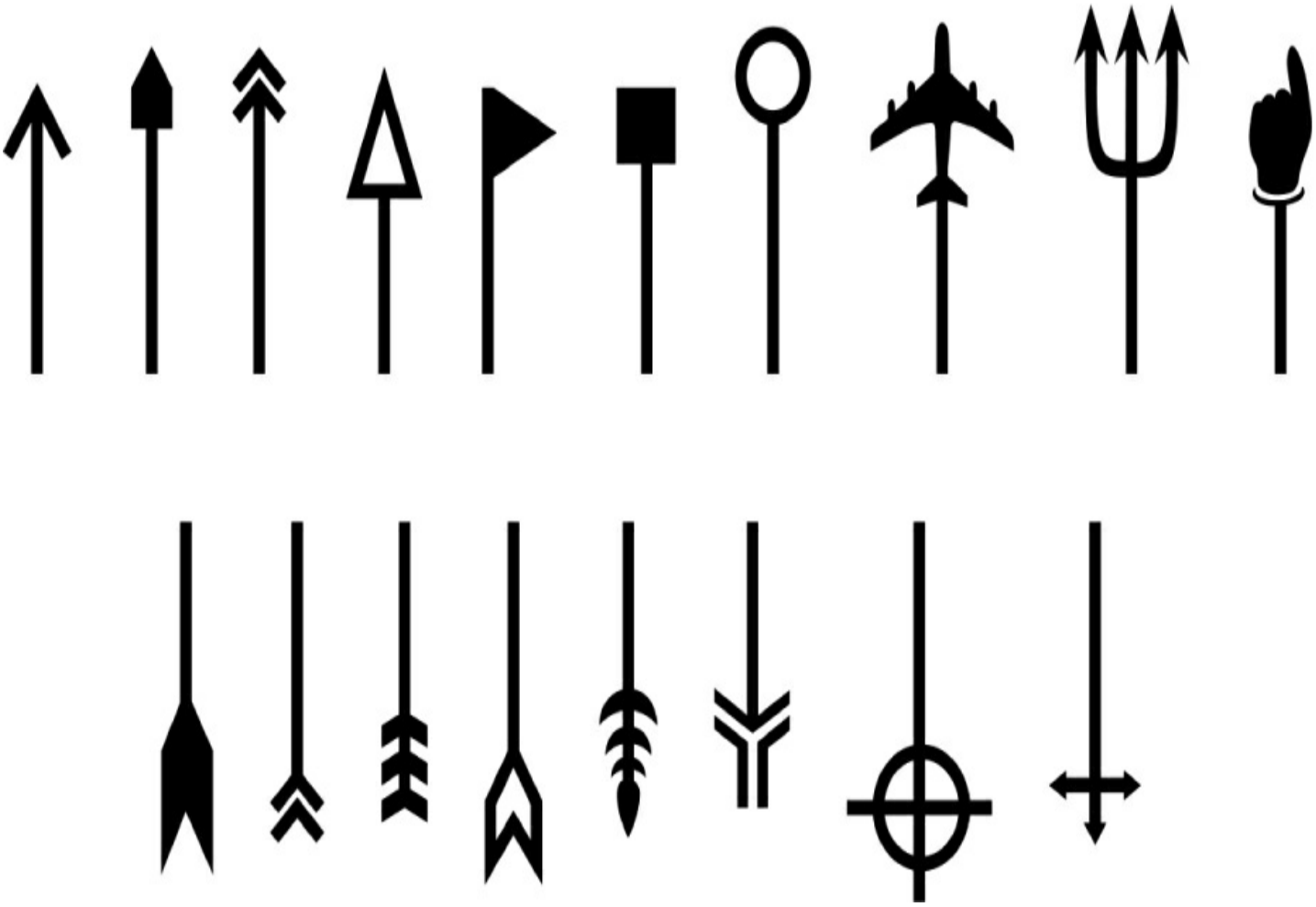
If the pattern applied to a path doesn't exactly match its length—for example, the pattern is longer than the path it's applied to—you might see a "seam," especially when applying outline styles to closed paths (as shown next). There are two ways to cure the problem. One is to go back to the Edit Line Style editor and increase or decrease the length of the pattern; this is a trial-and-error edit, but it doesn't change the path to which the style is applied. The other method (a desperate measure) is to lengthen the path by using the Shape tool or to scale the path by using the Pick tool. With either of these edits, you change your design and not your custom preset—it's your work, so the call is up to you. However, editing the style is usually the best way to avoid seams on a case-by-case basis with compositions you create.



Setting Outline Arrowheads

Arrowheads are both heads *and* tails on an open path, and although DRAW has a handsome

collection of preset arrows, an arrow can be almost anything you decide to draw. Most of the preset styles are arrowheads, but some are symbols that represent a tail. Here, you can see several of the styles and that many of the tails match the visual style of the arrowheads. When applied, arrowheads can be set to appear at the start and end points of open paths, at both ends, at one end, or, by default, at neither end.



Here's a trick to defining the size of an arrowhead or tail: you increase or decrease the size of an arrowhead by adjusting the outline width using the Property Bar or the Outline dialog. The quickest way to apply an arrowhead is by using the Start and/or End Arrowhead selectors on the Property Bar when an open path is selected. Incidentally, applying an arrowhead to a closed path has no visible effect unless the path is broken at some point.

Creating Custom Arrowhead Styles

Realistically, CorelDRAW will not always have the ideal arrowhead (and tail) preset for your (and every other user's) assignment—or the preset selector would need a head and a tail itself, from here to the moon! That's why you have the Tools | Create | Arrowhead command—don't choose the command yet; you need to *draw* the arrowhead first, as

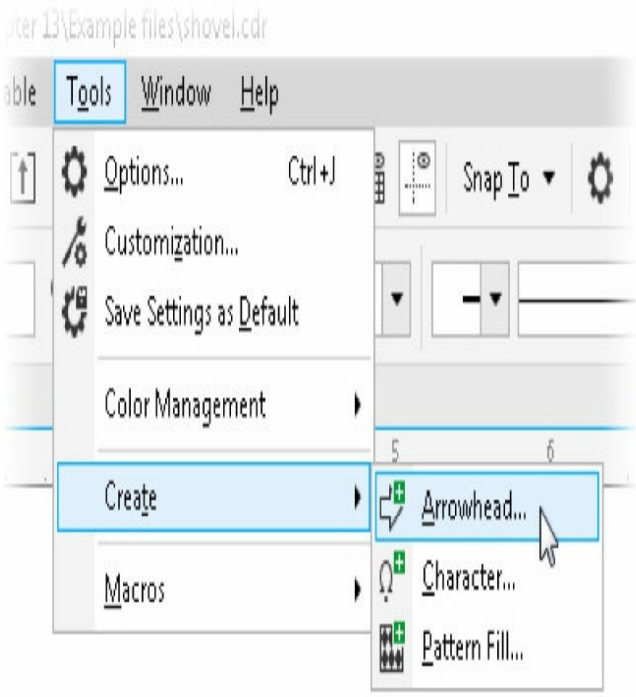
covered in the following tutorial. The best arrowhead should be simple in its construction and needs to be a single or compound path—fill makes no difference in creating the arrowhead because a finished and applied custom arrow style gets its color from the outline color you use on the selected path in your drawing. The orientation of the arrowhead needs to be in landscape, too, before you select the Create command. In other words, the top of your custom arrowhead design needs to face right, not the top of the page.

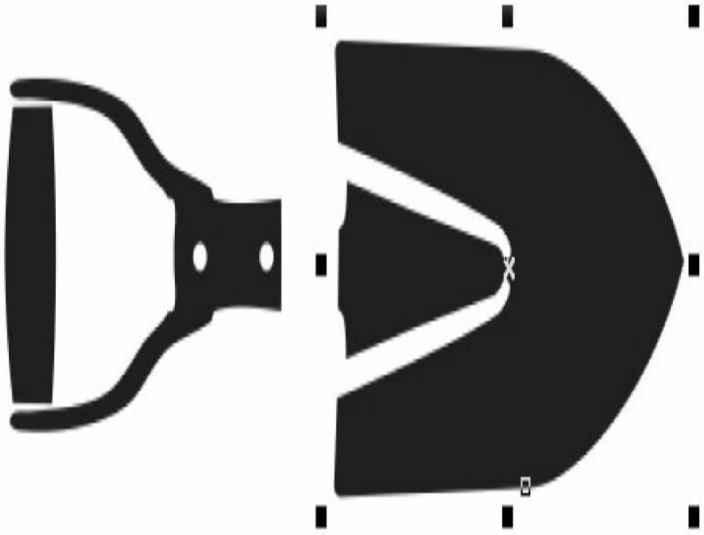
To create a new arrowhead and save it, follow these steps; if you'd like a jump-start, open Shovel.cdr first. It contains the elements needed to make both a head and tail.

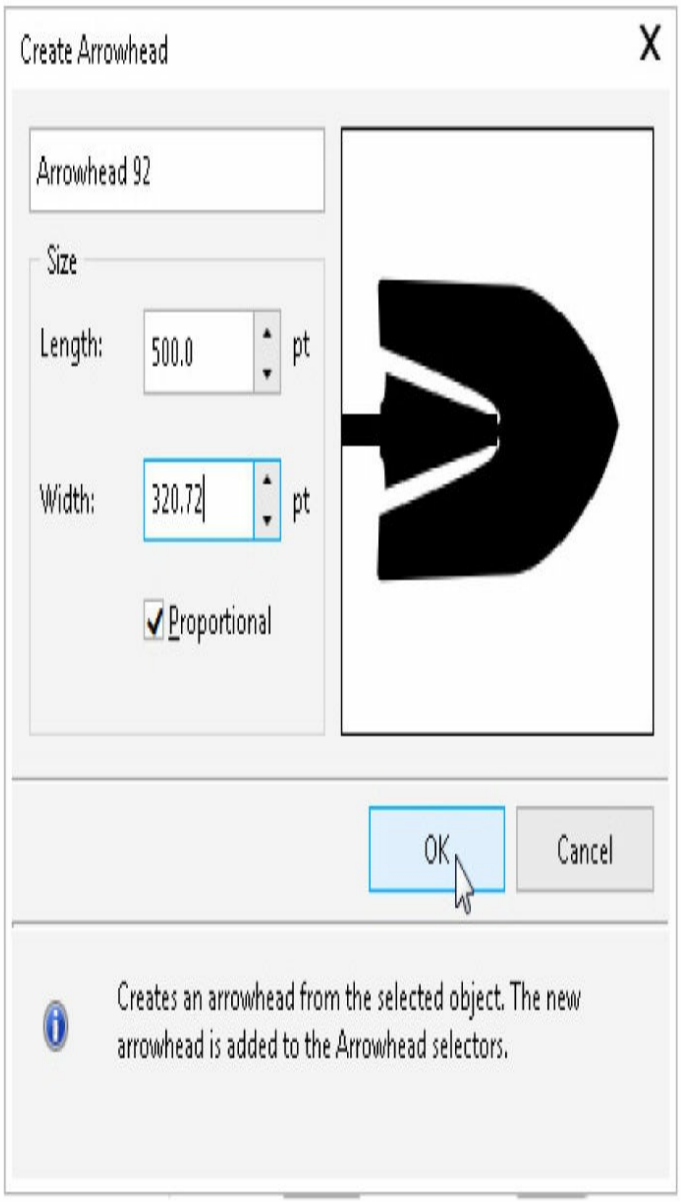
Drawing, Saving, and Editing an Arrowhead Style

Tutorial

1. Give some thought and planning to what would make a good arrowhead and tail. Shovel.cdr has a drawing of the ends of a common garden shovel. This design works for garden planning (an arrow pointing to "dig here"), treasure hunts, and certain civil engineering diagrams. Allow about 3" for your arrowhead symbols; this size gets you around the need to edit later. When you've drawn your arrowhead (a tail is optional for this tutorial), rotate it so it's pointing toward the right of the drawing page.
2. With the shovel head object selected, choose Tools | Create | Arrowhead.
3. Type a name in the upper-left field for future reference. If you like, the Create Arrowhead dialog gives you the chance to set a size for the arrowhead; by default, it's the size of your drawing on the page, as shown in the illustration here. Click OK, and your arrowhead is saved at the bottom of the Arrowhead selector list.







4. If you like, you can perform these steps for an arrowhead *tail* by selecting the shovel handle on the page. Possibly you're done now. Let's check, before calling it a day, to see how the arrowhead shovel looks when applied to an open path.
5. Using the 2-Point Line tool, click-drag a two-node path. Straight is good for checking out the arrowhead, but in the future a curved path might be more visually interesting.
6. With the path selected, on the Property Bar, choose the 10 pt. outline width so you'll have a clear view of the arrowhead you defined (or the shovel head if you used the Shovel.cdr file).
7. On the Property Bar, choose the arrowhead from the Start Arrowhead drop-down selector. Let's suppose you're not 100 percent happy with the look of the arrowhead;

you now access additional options for modifying the saved arrowhead. With the path selected, double-click the Outline Color icon (either the pen icon or the color swatch) on the Status Bar to display the Outline Pen dialog. Click the Options button beneath the thumbnail of your arrowhead and then choose Attributes from the pop-up menu.

8. Here's where you can correct a number of problems with your arrowhead; you cannot, however, edit the path of the arrowhead itself. If, for example, your arrowhead is pointing the wrong way, select Mirror | Horizontally. You also have the option to rotate the arrowhead, for corrective or creative reasons, as well as to move the head away from its parent line (the Offset options) and to smoosh or stretch the selected arrowhead proportionately or disproportionately. If you made a mistake drawing the arrowhead, you cannot change it in the editor; instead, you need to revise your drawing and then redefine the arrowhead. See Figure 13-2 for the visuals for these steps.

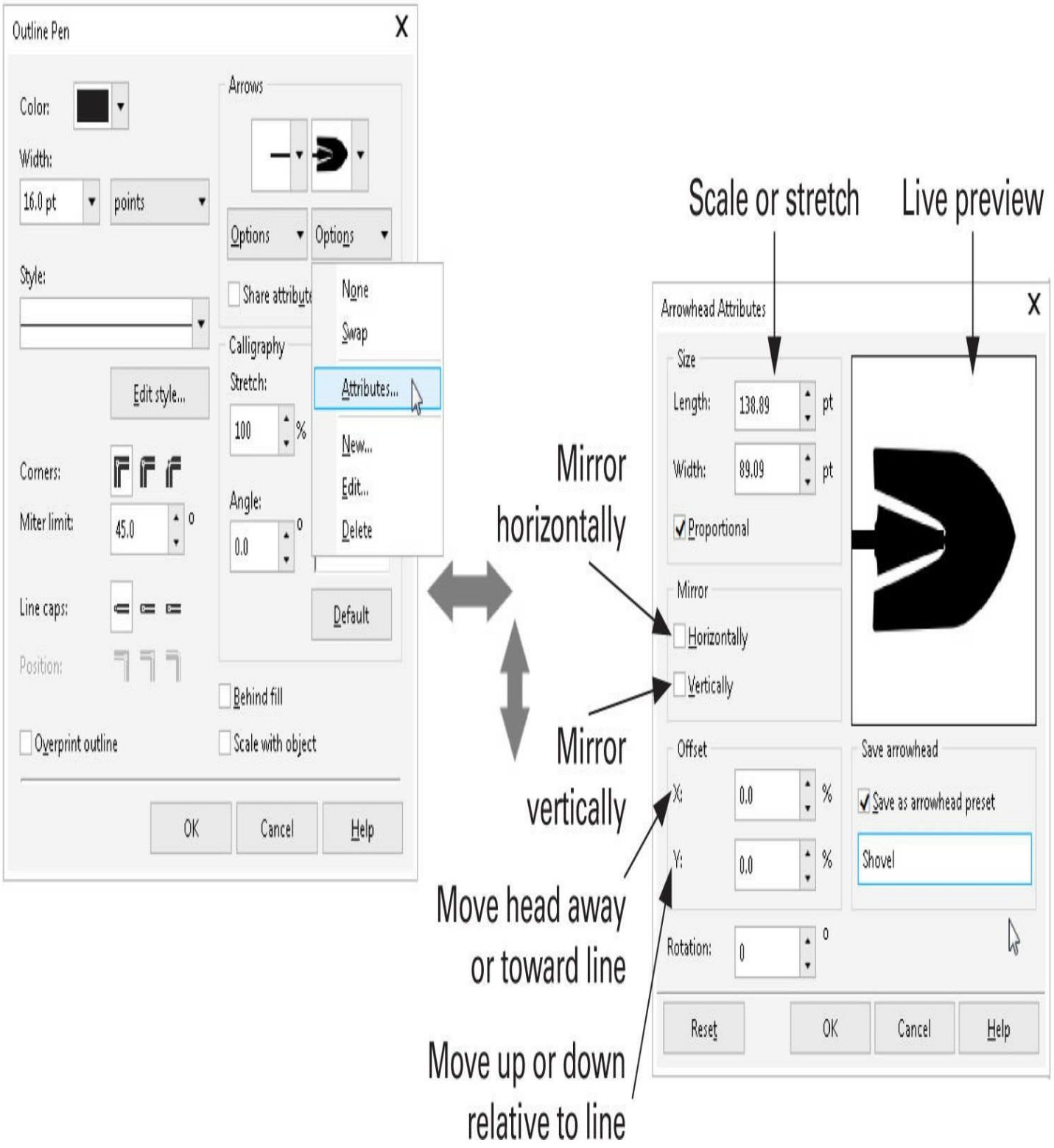
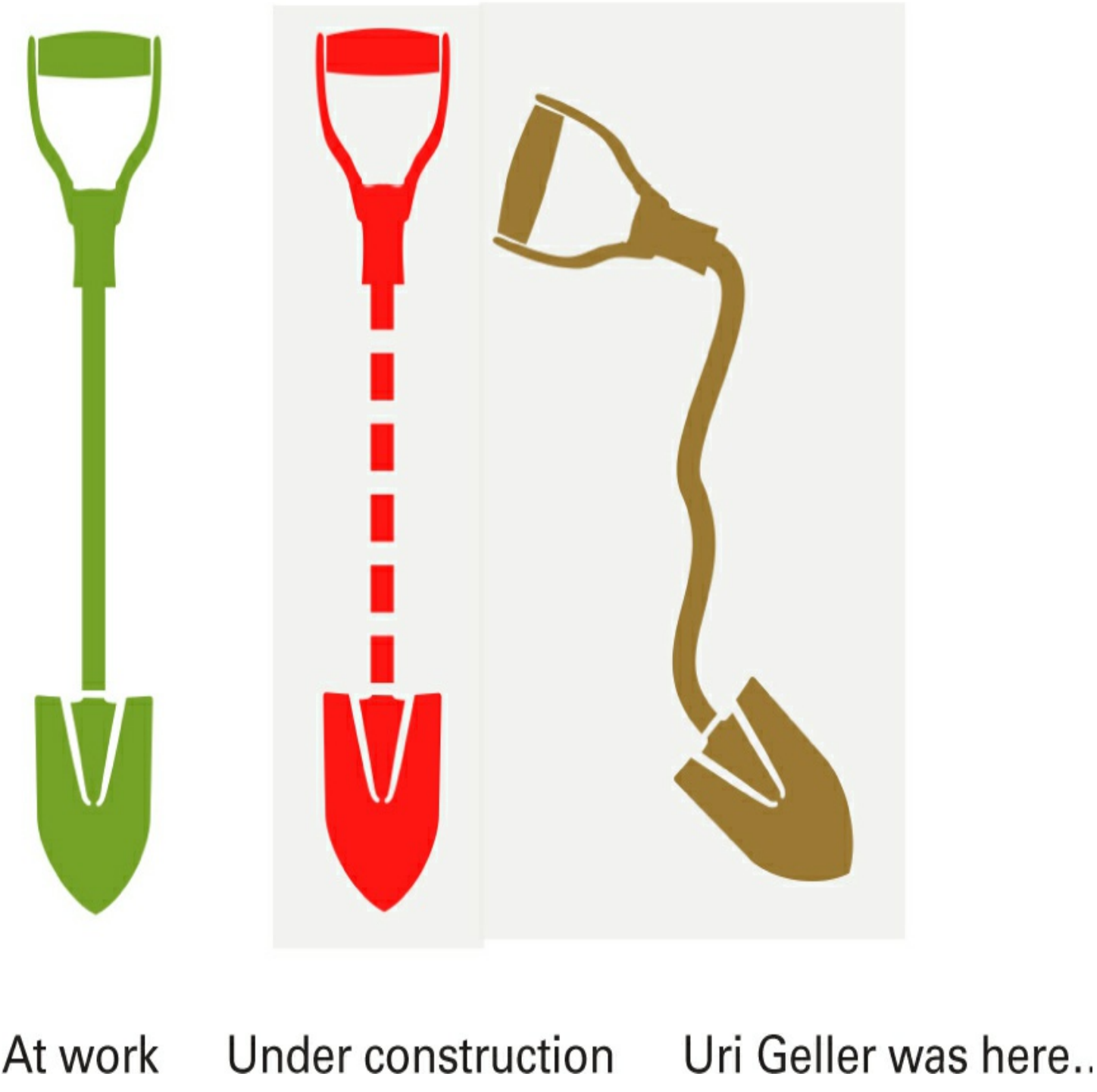


FIGURE 13-2 **Edit an arrowhead (or tail) in the Outline Pen dialog.**

9. Click OK to overwrite your saved arrowhead, or rename it to add it to your collection. The Arrowhead Attributes dialog can also be used to modify *existing* preset arrowheads, but only to the extent that you've just modified your custom arrowhead in step 8. End of tour!

Here you can see a few uses for a shovel. Don't be hesitant to mix and match outline styles; in the middle illustration, a dashed outline style happily coexists with a custom arrowhead.



Other Arrowhead Options

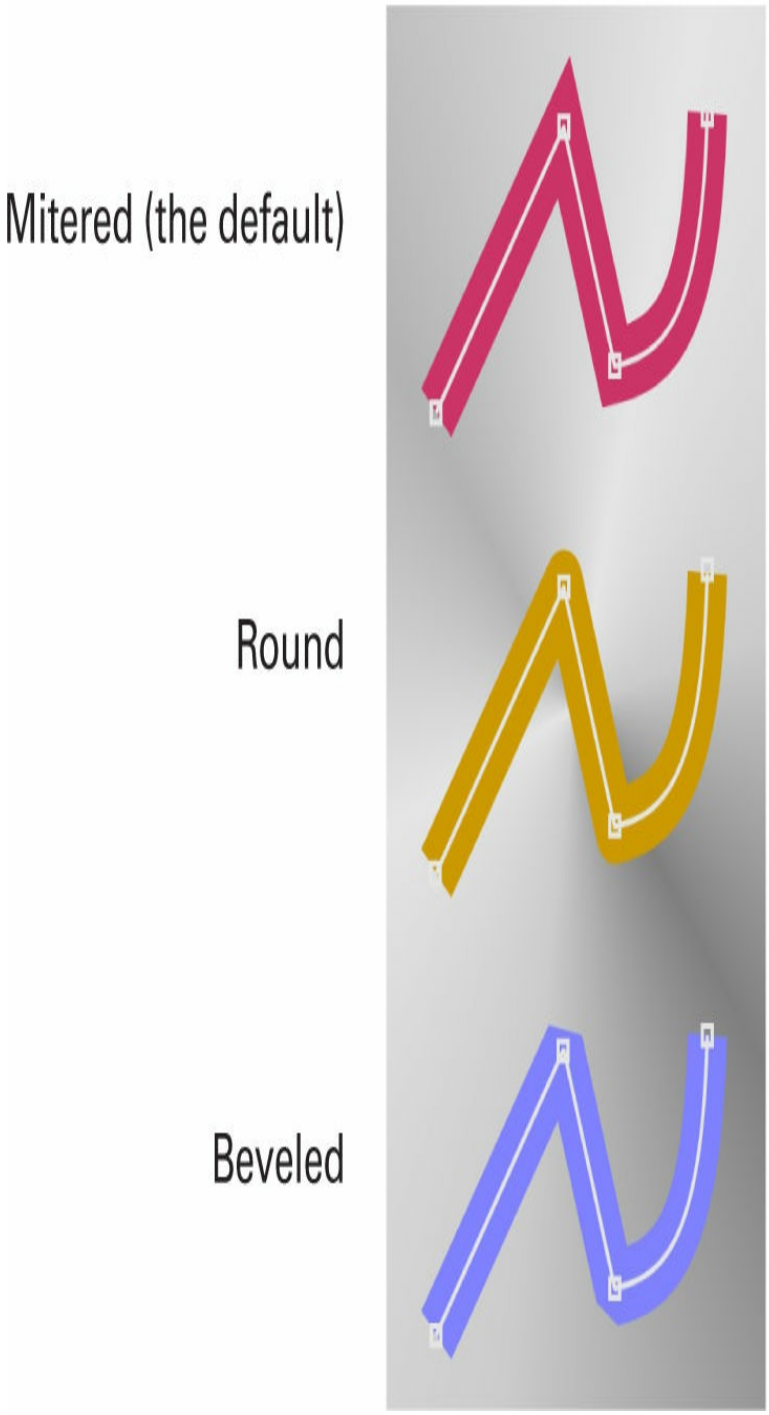
Other convenient options are available in the Outline Pen dialog when applying an arrowhead style. Just below each Arrowhead Style selector are two Options buttons. Click either the start or end Options button to open a drop-down menu that features—in addition to Edit and Attributes—the following commands:

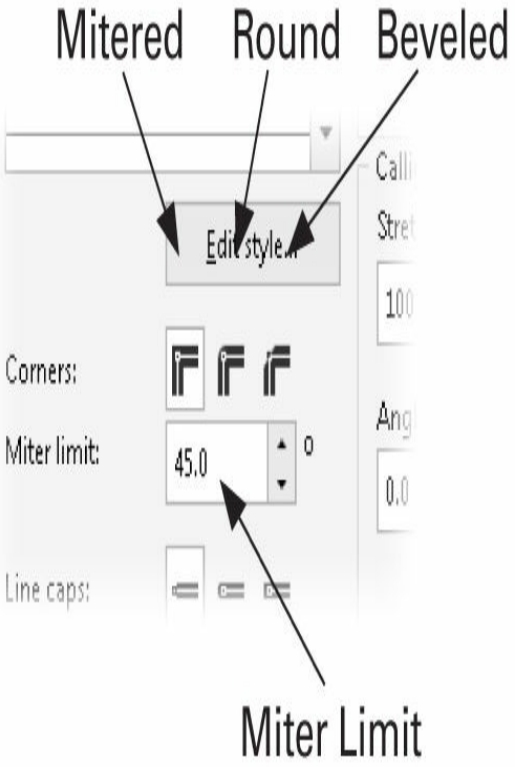
- **None** Choose this command to clear the arrow style you selected from your path. You can also do this from the document window using the Property Bar.
- **Swap** This command switches the styles currently selected for the start and end arrowheads. You can also reverse the path; select the path with the Shape tool, and the Reverse Direction button appears on the Property Bar.
- **New** Choose this command to open the Edit Arrowhead dialog and create a variation on a default style to add to the existing collection. New does *not* offer custom arrowhead creation; you need to use Tools | Create, as you learned earlier, to make a truly new arrowhead.
- **Delete** While an existing style is applied, choosing this command permanently removes the selected style from the collection.

Note The Share Attributes check box on the Object Properties docker lets you specify that the head and tail should be the same size, offset distance, and orientation.

Setting Corner Shape

You'll frequently create a path whose segments join at a node in a cusp fashion; the connection is *not* smooth—for example, a crescent moon shape has a least two sharp cusp connections between path segments. When shapes have *discontinuous* connections—that is, when a path abruptly changes direction as it passes through a node—you can set the appearance of the node connection through the Outline Pen dialog and the Object Properties docker. The illustration here shows the visual effect of selecting Round, Beveled, and Mitered (the default) joints on a path with cusp nodes. Notice that at extremely sharp node connection angles, the Beveled joint option produces an area of the outline that extends way beyond the path—an exaggerated effect you might not always want in a design. You can use Corner Style properties creatively to soften the appearance of a node connection (Round works well) and also to keep a severe cusp angle from exaggerating a connection. Mitered corners can often keep a path more consistent in its width than the default corner.



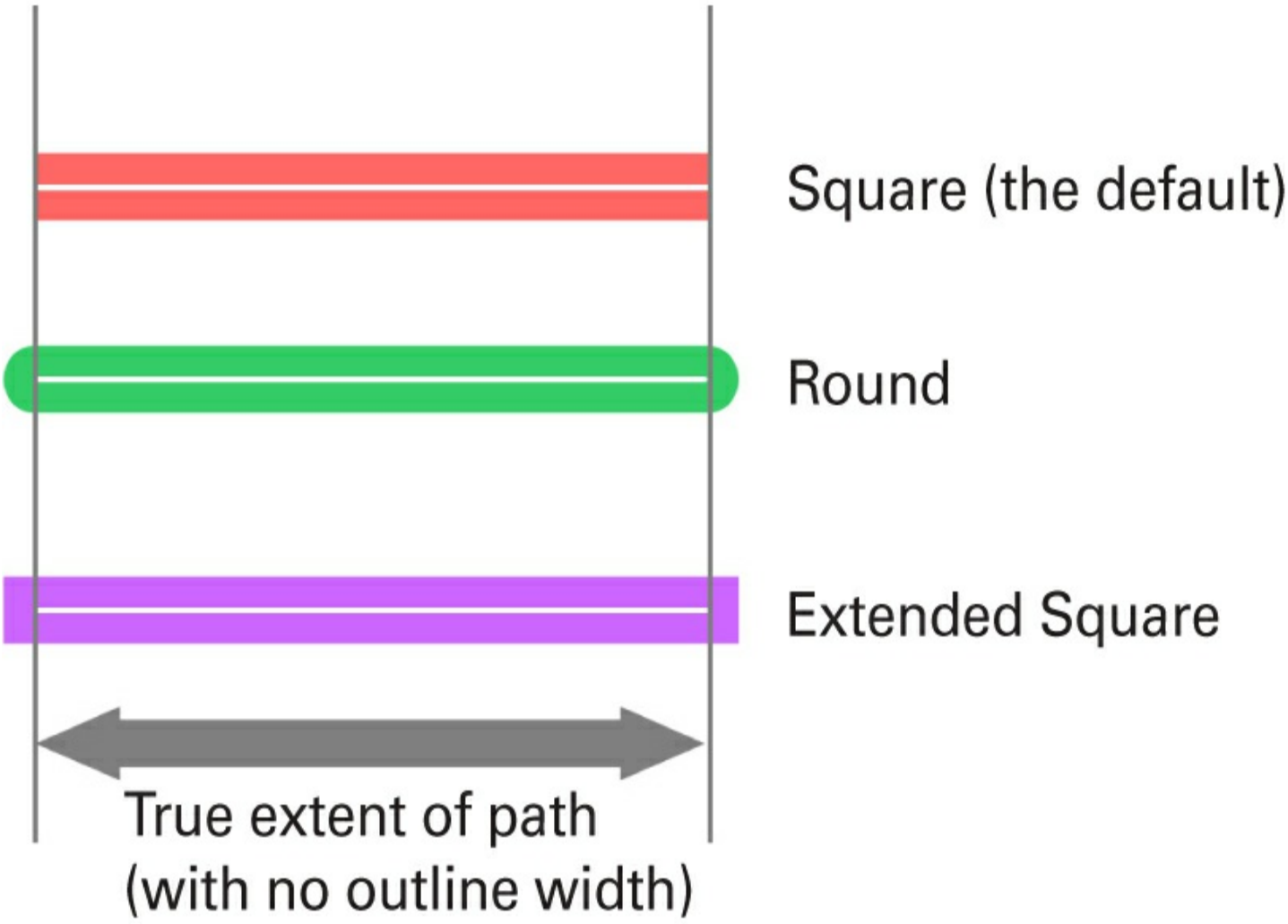


Also, you'll note a num box near the Corner Style settings; this is the Miter Limit angle, which you can set to suit your line needs. By default, if the angle of the line segments meeting at a path node is less than 45°, the Miter connection is automatically replaced by the Bevel connection type. If your *intention* is to have connections that overshoot, you might want to increase this value. Many artists who work with thick lines, however, choose to decrease this Miter Limit setting.

Setting Line Cap Shape

Line caps, the beginning and end of an open path, can look like their counterparts, the

corners, covered in the previous section. One of the greatest visual differences you can create is extending the true width of a path using the Round and Extended choices—the outline width overshoots the true path's length, proportional to the width you choose for an outline. Here are visual examples of your Line Cap options.



Applying Line Cap options to the end points of an open path affects not only the first and last nodes' appearance on an open path, but also dashed- and dotted-line styles. If you want a string of pill capsules, one way to do this quickly is to make a dotted line with short dashes, widen the line, and then apply the Round line cap.

Tip Line caps are not "mix and match"; for example, if you choose Round, both end caps in a two-node path are rounded—CorelDRAW has no facility for a two-node path that begins Round and ends Square.

Outline Pen Calligraphic Effects

The term *calligraphy* has come to be accepted today as a handwriting craft, the result of which is text and ornaments that have a varying width along strokes due to the popular use of a flat-edged pen nib held at an angle. The same effect can be achieved using the Calligraphic options in the Outline Pen dialog.

Calligraphic options—let's refer to the Object Properties docker here—are applied using a set of options and an interactive preview window to define the shape of the nib that affects a path you've drawn. *Stretch* controls the width of the nib using values between 1% and 100%. *Tilt* controls the nib rotation in 360° (the minimum, –180°, produces the same "12 o'clock" stroke angle as the maximum, 360 °). Click the Default button to reset these parameters to their original state. Stretch and Tilt values work together to achieve the nib shape. Set them numerically by entering values or, better still, set them interactively by placing your cursor in the Preview window and then click-dragging to shape the nib. By default, all paths in CorelDRAW are created using a Stretch value of 100% and a Tilt value of 0°. As you can see in Figure 13-3, varying the stretch and degree of a calligraphic nib changes the look of an outline, but the *shape* you begin with also has an impact on the final look of the design. For example, these three pairs of interwoven B-spine paths are identical, but the one on the left is perhaps more visually interesting and elegant with its 45° angled nib. The point is that if you have an object you think will look more refined and elegant with a calligraphic stroke, keep changing the angle until you're happy with the finished artwork.

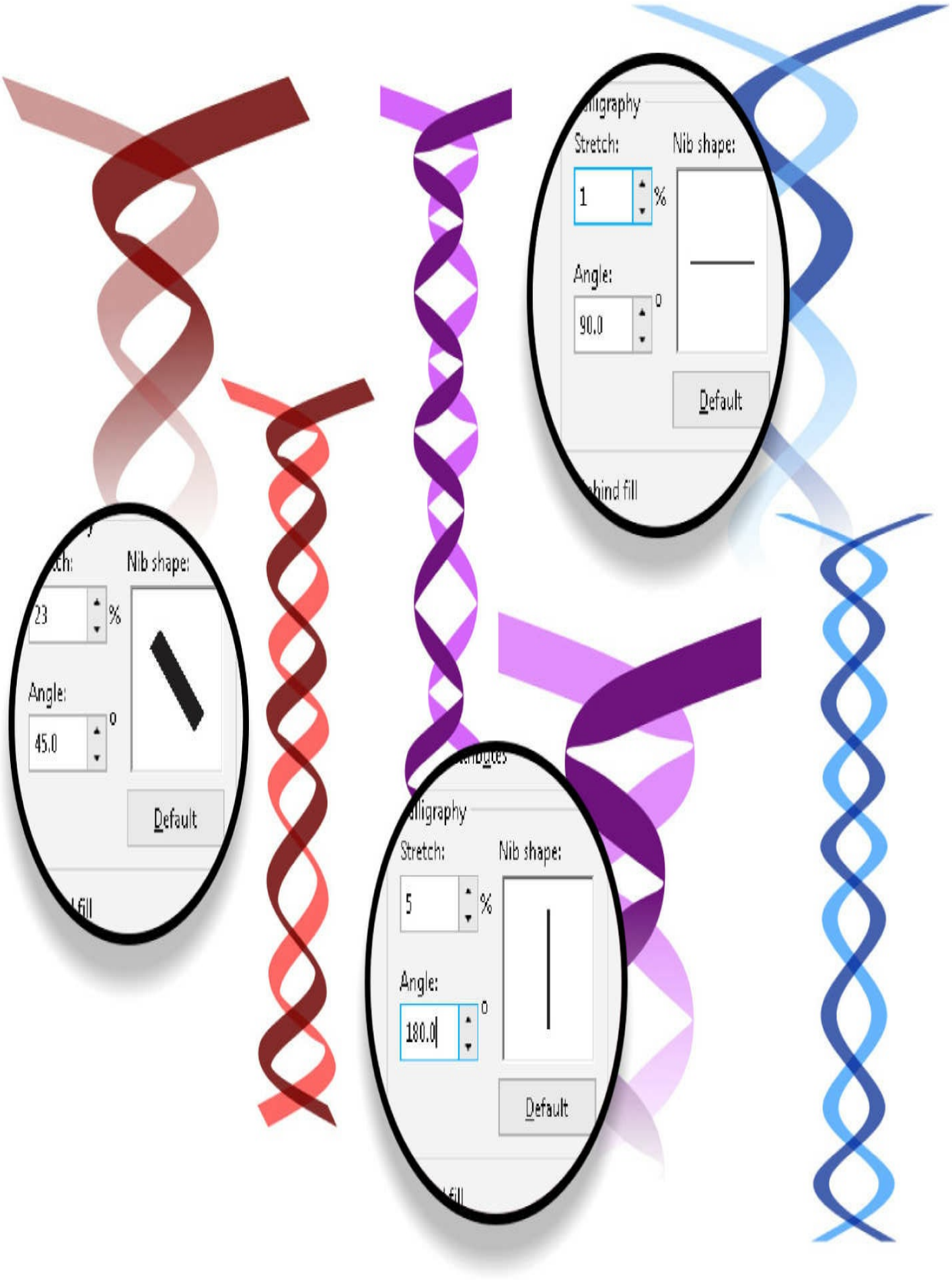

Stretch:
Nib shape:
1
%
Angle:
90.0
°
Default
23
45.0
5
180.0

FIGURE 13-3 **Calligraphic effects can be used as ornamentations to a piece of work or to imitate handwritten phrases.**

Tip The Artistic Media tool—covered later in this chapter—has a Calligraphic style that can be used as a brush; you just drag on the page, and it immediately produces angled paths.

Scaling and Behind Fill Options

Two more options for controlling how outlines display in particular design situations are available in the Outline Pen dialog. The following sections explain how Scale With Object and Behind Fill work.

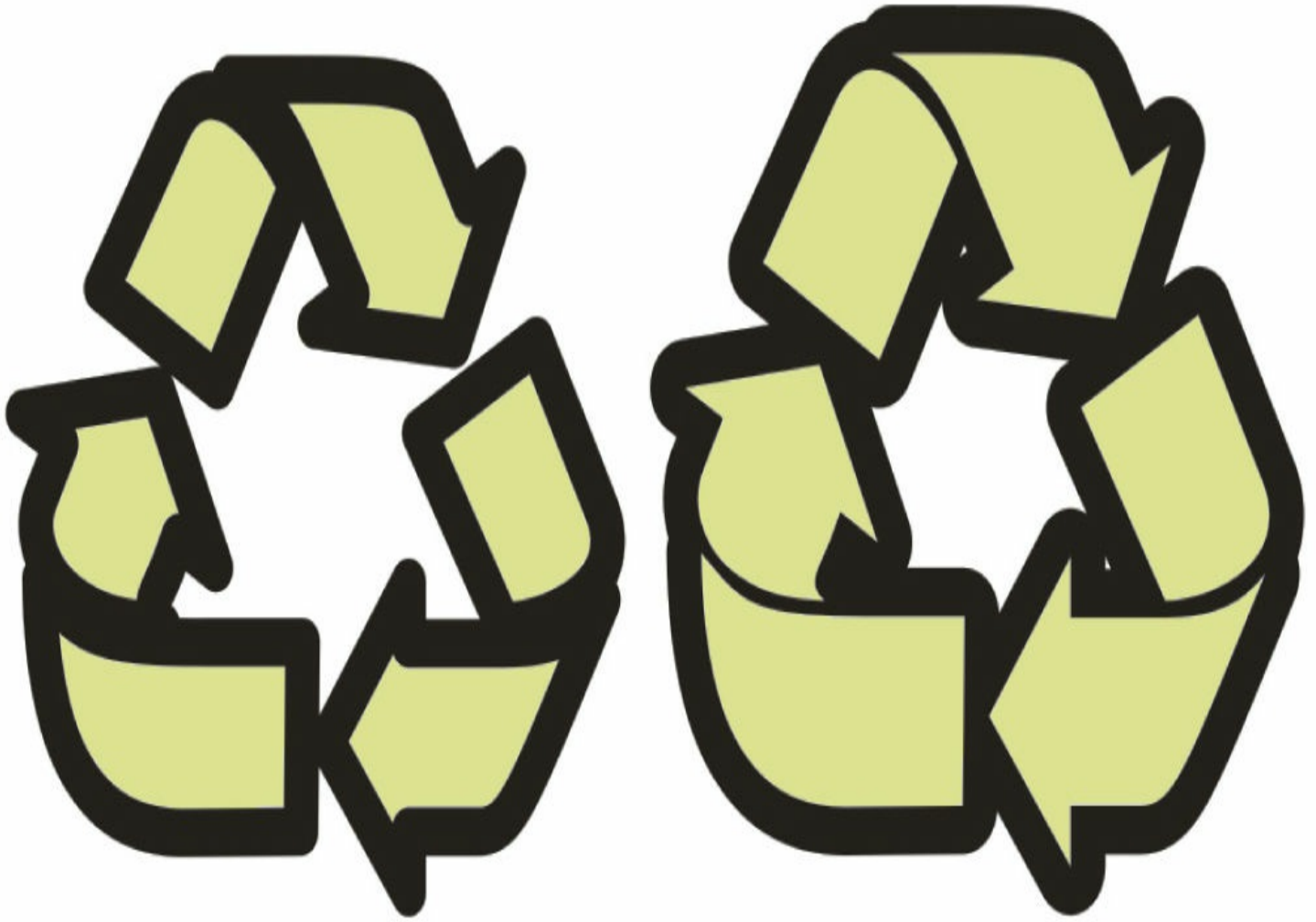
Scale With Object

Choose Scale With Object to increase or decrease the outline width applied to an open path or closed object when you scale the object at any time after the outline width has been applied.

For example, a 2-point outline width applied to a path becomes 1 point if the object is scaled in size by 50 percent. However, if you leave the scale constant (leave Scale With Object unchecked), you can duplicate, for example, 50 stars, arrange them on the page at different sizes, and the design looks good because the outline width is consistent from star to star. The illustration here shows copies of a pretzel shape reduced with and without the Scale With Object option selected.

Behind Fill

Behind Fill sets outline properties to print and display in *back* of the object's fill. One of the many practical uses for Behind Fill is in a sign or other simple illustration where you need rounded corners along the outline, but sharp and crisp edges along the fill, the most important and recognizable part of many illustrations. Here, on the left, you can see the ubiquitous recycle symbol with a 16-point rounded-corner outline. The arrows are lost in the design. However, on the right, a 32-point outline is used with Behind Fill checked in the Outline Pen dialog. Therefore, the same outline width has been achieved (visually); however, because the outline is behind the fill, the points on the arrows are undistorted, even in weight, and will print crisply.



16 point outline in front of fill
Most edges are soft

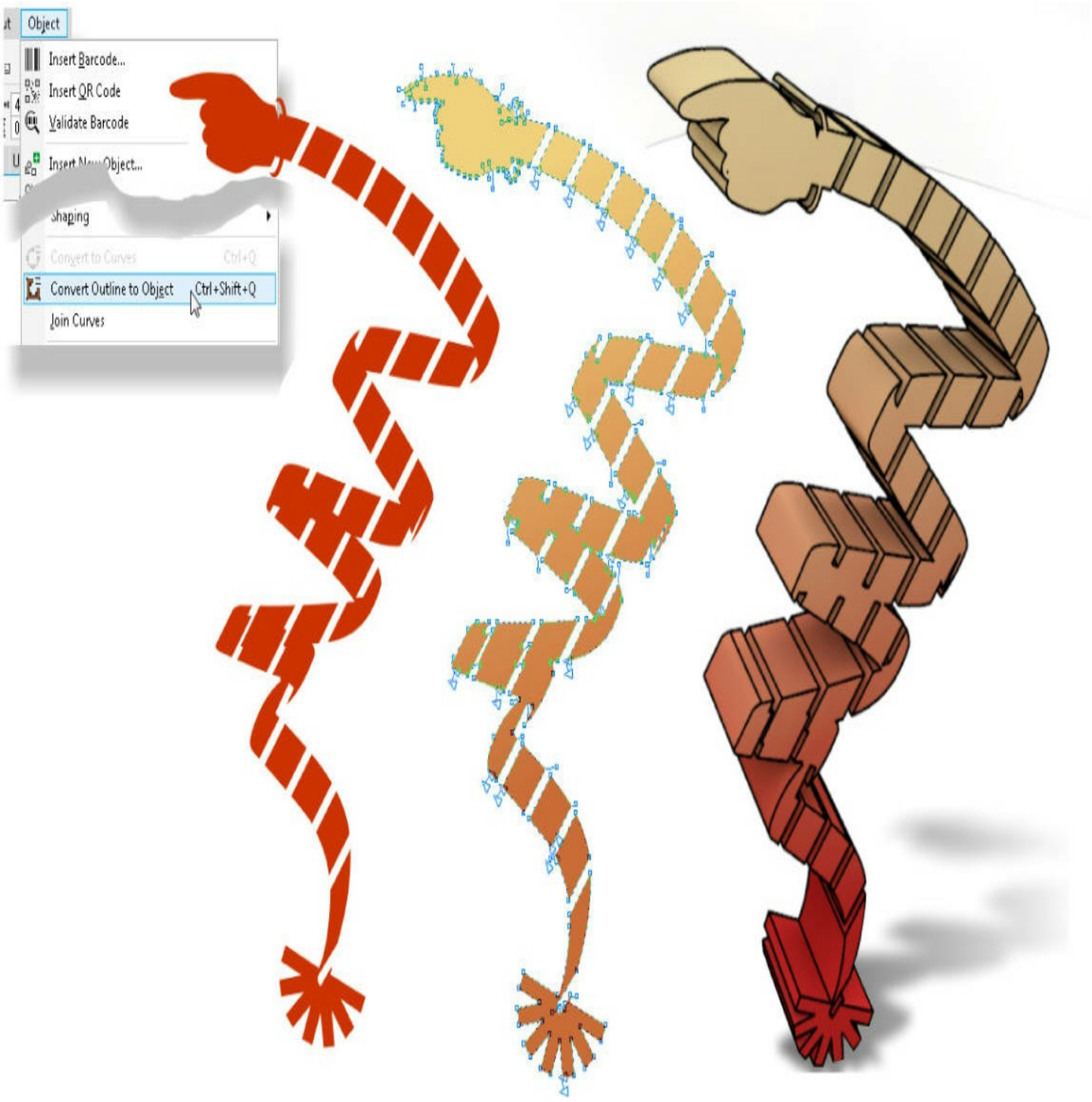
32 point outline behind fill
Edges are crisp and detailed

Turning an Outline into an Object

A fancy calligraphic property for an outline, arrowhead, and even for dashed outlines can be edited to a greater extent as an *outline* property when you convert an outline to an object. Consider this: an outline is constrained to solid fills, whereas an object that *looks* like an outline, that was originally *based* on an outline, can have any type of CorelDRAW fill. To make an outline into a object, choose Object | Convert Outline To Object—but it will disturb your workflow less if you perform this on a *copy* of the path you slaved over! The shortcut is similar to Convert To Curves; it's CTRL-SHIFT-Q. The path you see in the illustration that follows is fully loaded, using a calligraphic nib, a dashed line, an arrowhead, and a tail. It is about to become a shape that's as editable with Toolbox tools as a rectangle or an ellipse, and will accept all of CorelDRAW's effects, such as contours, fountain fills, and texture fills; even the Extrude tool can turn this shape into elegant,

abstract, or bizarre artwork.

On the left in this illustration, you can see the path; in the middle, the path is now a shape that will take, in this example, a Linear Style fountain fill—in contrast, you can't fill an open path. On the right in this illustration, you can see the arrowhead path is now a shape that can be extruded. To come full circle, the new object based on the path can have an outline; in this case, a black outline behind the fill is used artistically to visually separate the linear fill areas.



Using the Artistic Media Tool

The Artistic Media tool treats a path as though it's a skeleton to which you can apply any number of CorelDRAW preset "skins": there are five different types of Artistic Media "brushes" and a number of preset variations for the Preset, Brush, and Sprayer Artistic Media types. It helps to get your mind around a "paintbrush" metaphor; by dragging strokes, you can wind up with anything from complex filigree strokes to elegant calligraphic handwriting. The underlying path of an Artistic Media stroke can be altered at any time, changing the corresponding look of the media—and you can see the dynamic changes for accurate visual feedback as you work. You can draw while an Artistic Media effect is enabled, and you can also apply these painterly strokes to existing lines.

You don't have to give up the Pen tools in CorelDRAW to add another dimension to outlines you create. The Artistic Media tool—directly below the Pen Tools group on the Toolbox—can be used by itself as a drawing and painting tool, and the media that comes with DRAW can also be applied to paths you've already created using other drawing tools. Use Window | Dockers | Effects | Artistic Media to go about making more expressive artwork the "manual" way, without the Artistic Media tool itself.

With the Artistic Media tool selected, the Property Bar offers five different line-drawing modes, shown in Figure 13-4, each of which has its own options. There are additional options on the Property Bar, directly to the right of your choice of Artistic Media, and the options change, depending on the media type selected.

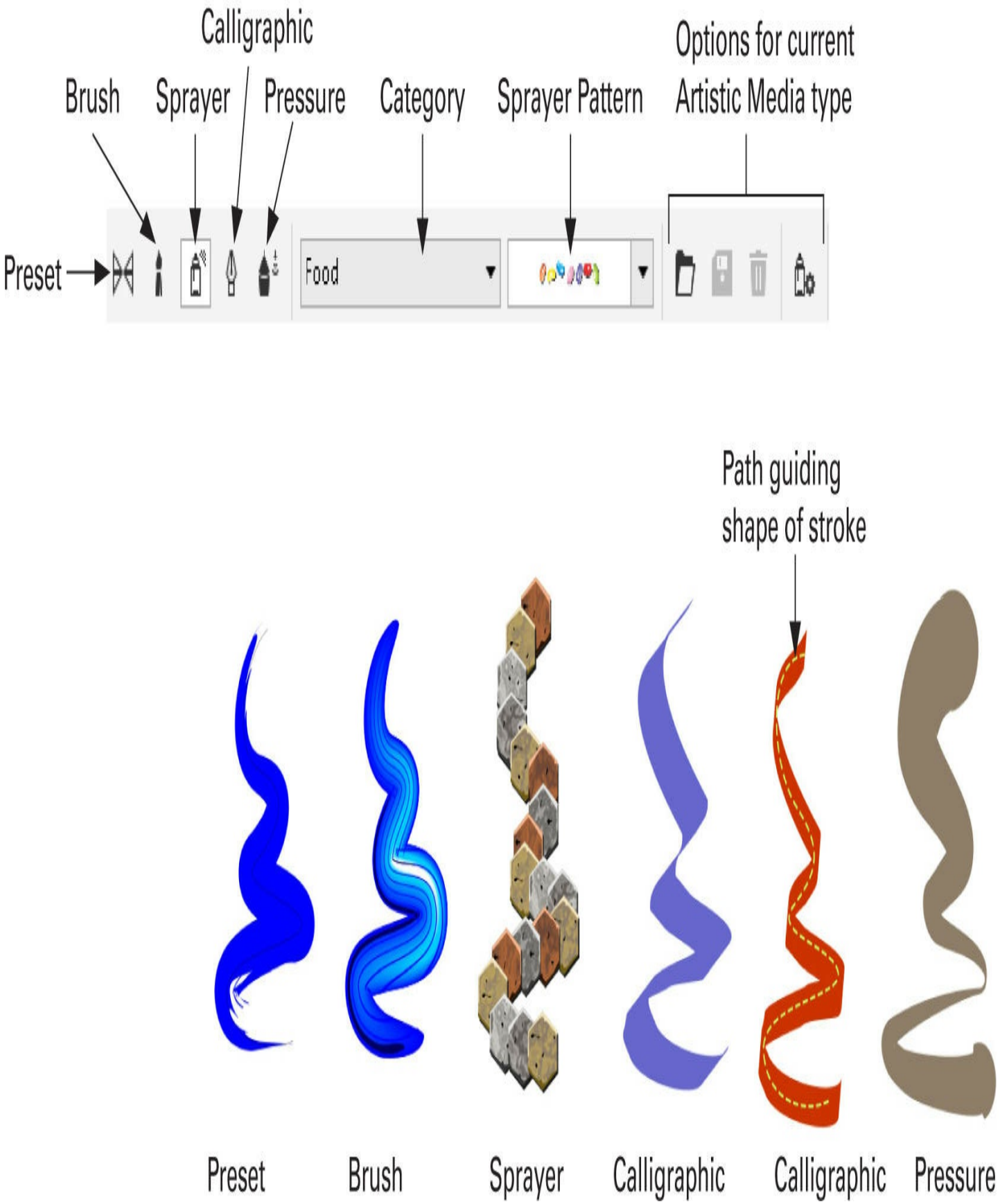
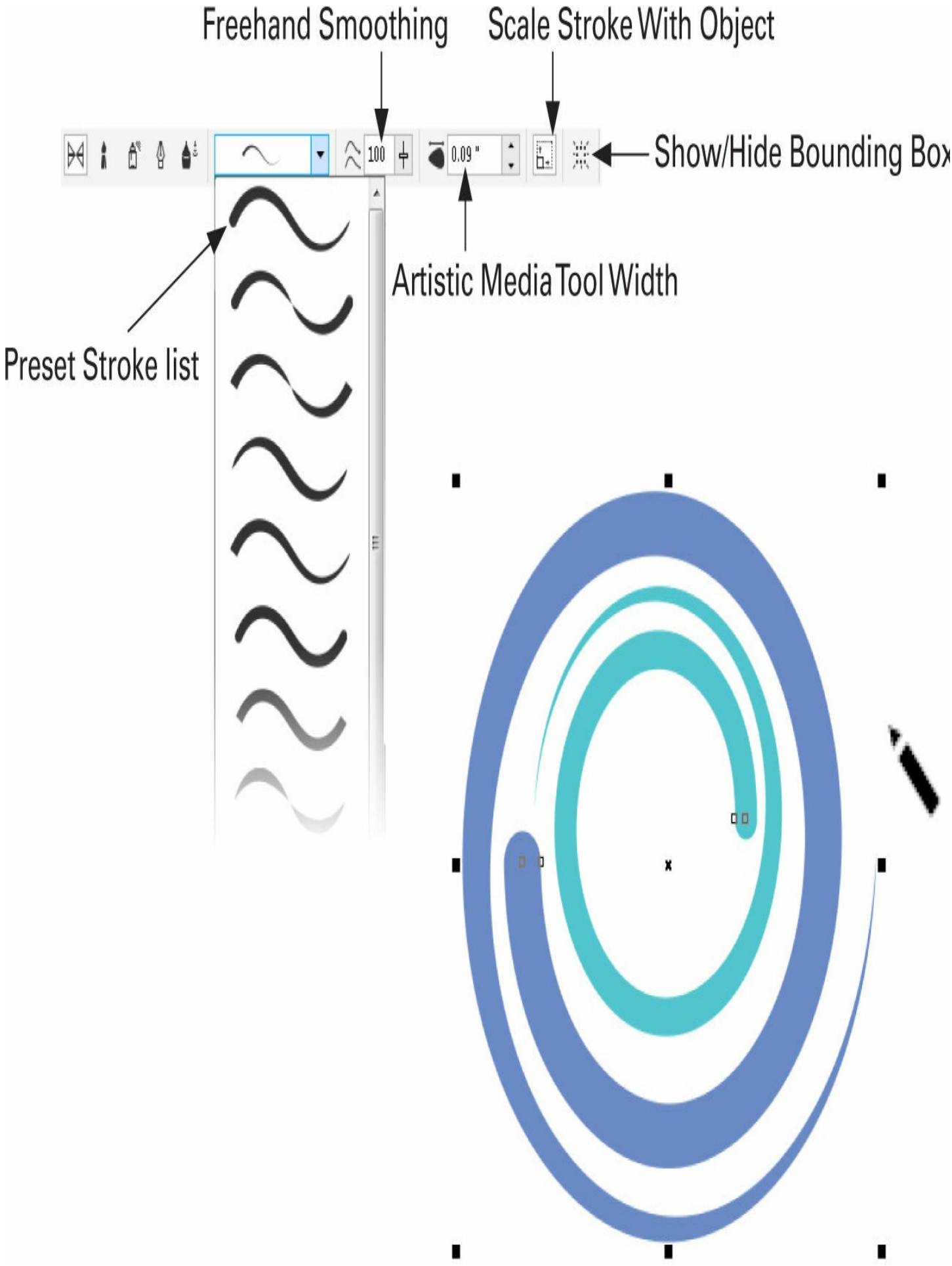


FIGURE 13-4 **The Property Bar offers five different line-drawing modes, each of which has its own options.**

Applying Presets to Lines

Powerlines—elegant strokes found in previous versions of DRAW—are now called *Presets*. When Presets is selected on the Property Bar, the Artistic Media tool surrounds your drawn lines with specific preset vector shapes that are dynamically linked to the underlying path. The smoothness and width of the applied effect is set according to the Freehand Smoothing and Width options on the Property Bar, as shown here.


Freehand Smoothing
Scale Stroke With Object
100
0.09 "
Show/Hide Bounding Box
Artistic Media Tool Width
Preset Stroke list

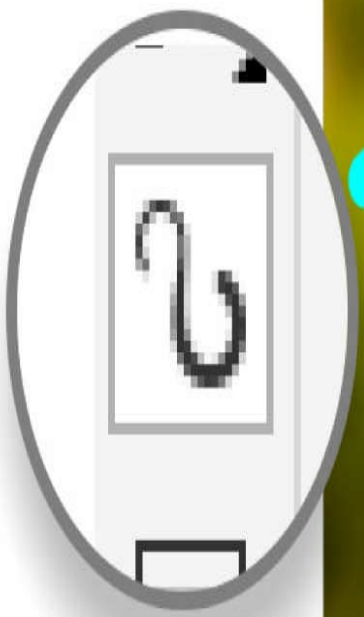
Set the shape using one of the styles in the Preset Stroke list. Smoothing is based on percent values between 0 (no smoothing) and 100 (maximum smoothing). Width can be set on a unit measure within a range of 0.03 to 10 inches. As you draw, a path is created in freehand style and immediately applied to your line.

Ready to take the Artistic Media tool out for a spin? The following tutorial walks you through the completion of an illustration—adding cartoon "reaction lines," the sort of emanations a character has when struck with a revelation—like *you* will be when you discover how the Artistic Media's Preset brush works and feels.

Painting with a Drawing Program

Tutorial

1. Open Pinwheel.cdr in CorelDRAW. The objective here is to highlight the different petals on the pinwheel by making different colored strokes emanating from them in an outward direction.
2. Choose the Artistic Media tool and then click Preset, the far-left button on the Property Bar.
3. Click the Preset Stroke selector and choose a style from the drop-down list. For this example, choose a style that has a rounded head and tapers at the end to a point.
4. Think of how you'd draw a cartoon sun; drag strokes so the "sun" is the center of the pinwheel. The target width for the strokes is about .4". If your current stroke width is something different, you now have an opportunity to become familiar with Artistic Media features; while the stroke is highlighted, you can increase or decrease its width on the Property Bar.
5. The head of the Preset Stroke starts where you begin your click-drag. If you drew a stroke backward, you can easily fix this. Press F10 to choose the Shape tool, click to select the stroke (you'll see the underlying path when the stroke is properly selected), and then right-click and choose Reverse Subpaths from the context menu.
6. Click the Artistic Media tool in the Toolbox, and you're ready to continue stroking. The Artistic Media tool is persistent—it "remembers" your last-used stroke settings, styles, and all that good stuff.
7. The Preset Strokes you create are a special instance of an object surrounding a path. You can, therefore, recolor the default black fill. With a stroke selected, try clicking a color swatch on the color palette. The enhanced, quite excited pinwheel is now in color on your monitor and in the e-book version of this Guide, shown in Figure 13-5.



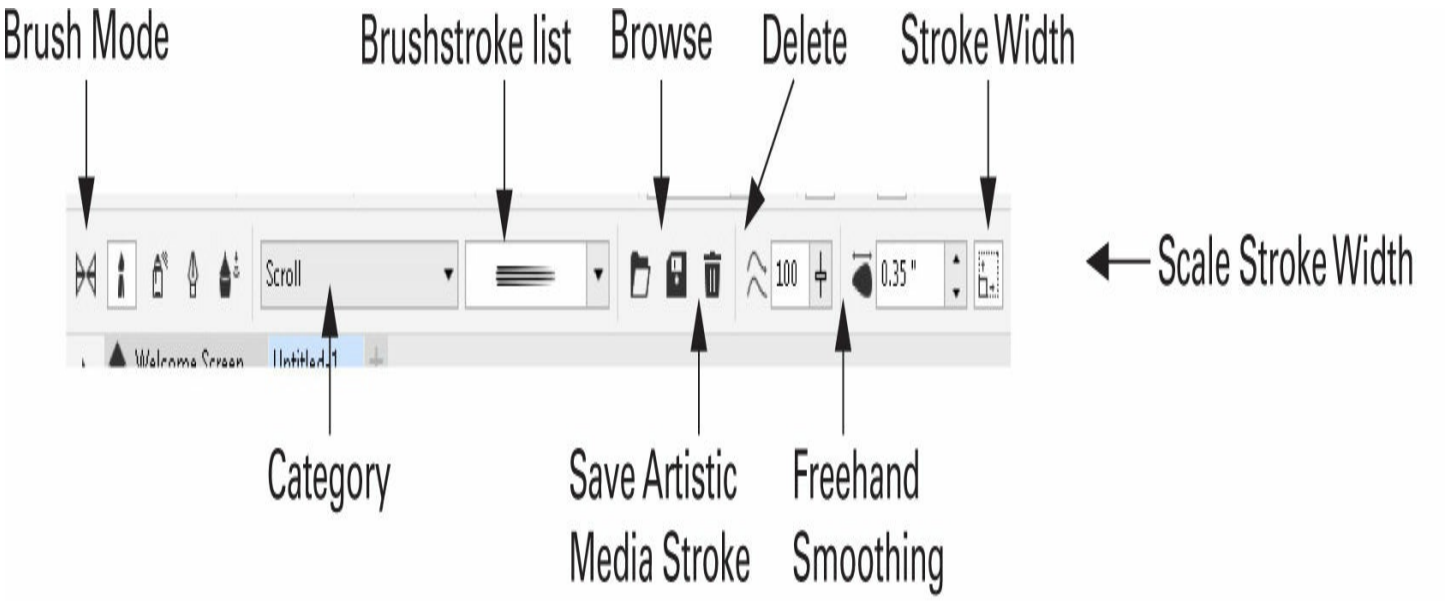
Click a color well while the stroke is still selected.

FIGURE 13-5 **When a Preset Stroke is selected, you can change its width, smoothness, and color.**

8. Let's say you want to get adventurous and change the Preset for one of the strokes. While the stroke is selected, choose a different Preset Stroke style from the drop-down list. Now, every subsequent stroke you make will have that new style. When choosing it, be sure to click *the outer part* of the stroke and avoid *the underlying central path* itself. If you've deselected a stroke and want to change it, choose it with the Pick tool and then use the drop-down list. Alternatively, you can click (don't click-drag, though) on a stroke on the page to select it and then change the Preset Stroke style. Now go find some meteorological turbulence to put that pinwheel to work!

Drawing with Brushes

In Brush mode, you can simulate the look of traditional natural media, which looks very similar to the brushes in Corel Painter, with a notable exception. Beneath an Artistic Media stroke lies a skeleton path, and the strokes you make can be edited ad infinitum. In contrast, bitmap paint programs such as Corel Painter and Adobe Photoshop feature brushstrokes that can't be edited after you make them. Like the Presets category, Artistic Media brushes extend the full length of every path you create.



The Brushstroke list offers a variety of different styles. Freehand Smoothing and Stroke Width options are used to change the appearance of the graphical object—the "skin"—applied to the underlying path.

You can draw using a brush style or, alternatively, apply one to an existing line. To draw using a brushstroke, choose the Artistic Media tool and use the Property Bar options to choose a brush style. Begin drawing by click-dragging on your page in a stroking motion. To apply a new brushstroke to an *existing* line, select the line using the Artistic Media tool, choose the Brush mode, and use Property Bar options to choose a width and brushstroke style. The important thing with this technique is to *create a change in settings* on the Property Bar because there is no Apply button or anything to confirm the changes. However, you can make a slight change to the Stroke Width setting on the Property Bar to

apply the effect. You can load saved brushes by clicking the Browse button on the Property Bar, and you can save your own objects as brushstrokes and add them to the existing Brushstroke list.

Tip Custom Artistic Media brushstrokes are saved to Corel's CMX file format, which is a limited subset of its native CDR file format. You don't have unlimited options when creating your own brush, but you *can* use a simplified contour or blend to create a graduated color effect that can stretch when used as a stroke.

Applying the Sprayer

The Artistic Media tool's Sprayer mode is used to pepper the drawing page with a sequence of drawings—your *own* that you save as a brush or by choosing a preset from CorelDRAW's Sprayer collections. Changes to the underlying path and the objects used in a spray can be dynamically changed at any time. The sprayer objects repeat uniformly or randomly across the full length of a path. The Size/Scale, Spray Order, Dabs, Spacing, Rotation, and Offset values can be set using the Property Bar, shown in Figure 13-6.

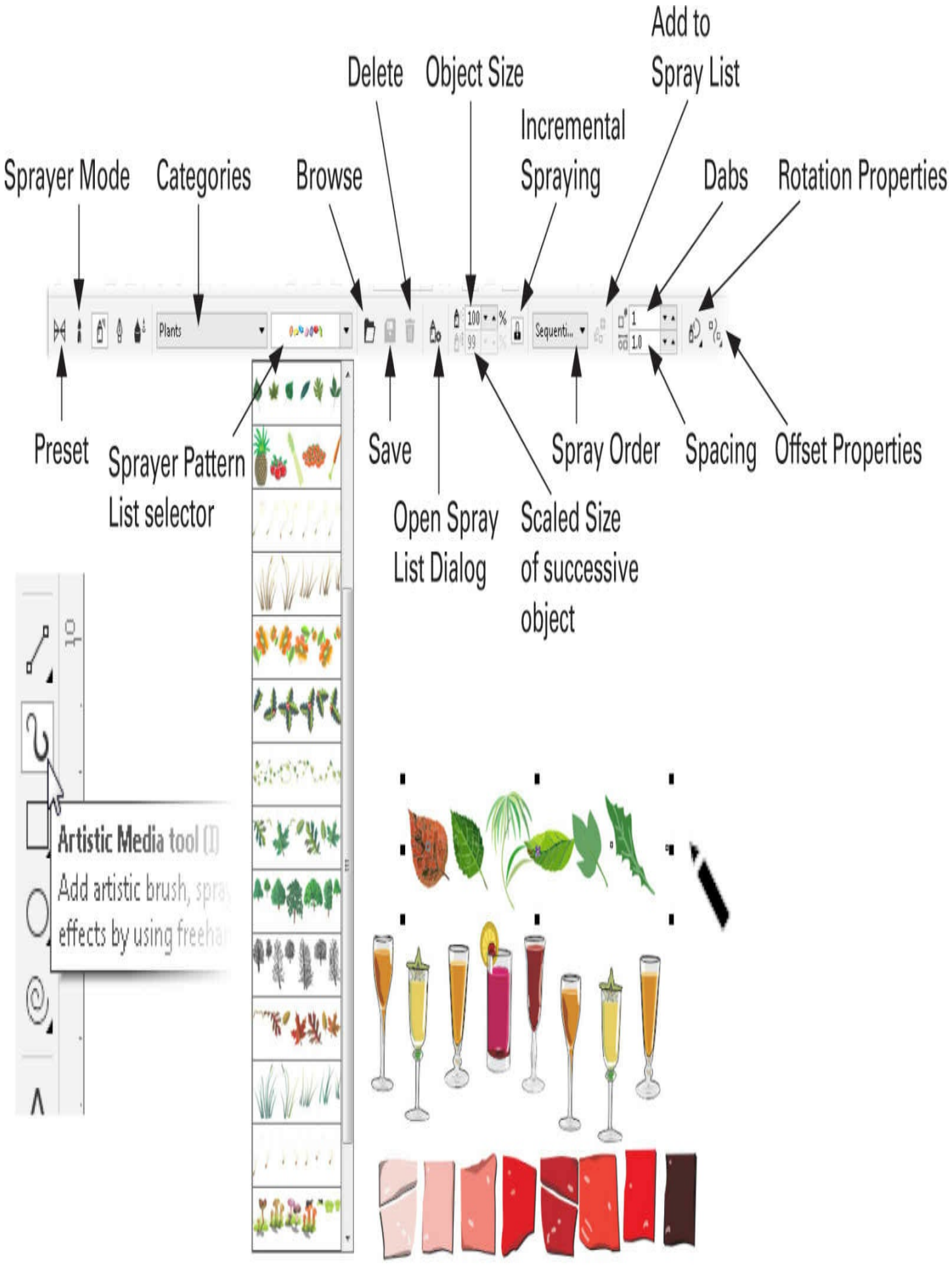

Add to Spray List
Delete
Object Size
Incremental Spraying
Sprayer Mode
Categories
Browse
Dabs
Rotation Properties
Plants
100
99
1
1.0
Sequenti...
Preset
Sprayer Pattern List selector
Save
Spray Order
Spacing
Offset Properties
Open Spray List Dialog
Scaled Size of successive object
Artistic Media tool (I)
Add artistic brush, spray effects by using freeha

FIGURE 13-6 The Artistic Media tool's Sprayer mode offers a huge number of design variations.

The Sprayer Property Bar options give you control over the following:

- **Object Size and Scaled Size of successive object** Two options control the initial object size of the Sprayer style (that is, the objects that make up a specific Sprayer type) based on a scaled percentage of the original Sprayer object selected. When the Scaled Size of successive object option is unlocked, you can set the scaling size of successive objects to be increased or decreased in scale relative to the size of the first object in the Sprayer style. Some preset sprays offer scaling, whereas some do not, owing to their construction. The Snowflakes preset, for example, offers successive scaling; it's in the Misc. category. The bottom field is dimmed when you've chosen a preset that cannot be successively scaled.
- **Spray Order** This option lets you set the ordering of the Sprayer objects: Randomly, Sequentially, or By Direction. If the Sprayer style features only one object to vary, changing this option has no effect. Try the Mushrooms preset in the Plants category; the spray presets contain several different objects of different sizes, and you can get various looks by choosing Randomly and By Direction.
- **Dabs and Spacing** These two values set the *number of objects* to be placed along a drawn or existing path and *the distance between* the center of each object. *Dabs* are the individual objects in the Sprayer style; *Spacing* controls how many objects appear within a given distance. Think of spacing as "population."
- **Rotation** This option sets the angle for the first object in the Sprayer style. The *Increment* option compounds rotation values for each subsequent object. Rotation angles and increment values can be based on the degree measure relative to the page or the path to which the objects are applied. If you need a circular pattern whose objects are oriented toward the center of the circle, for example, the Rotation option is your ticket.
- **Offset** This option sets the distance between the path you click-drag and the Sprayer objects. *Offset* can be set to Active (the default) at settings between roughly 0.01 and 13 inches. The direction of the offset can also be set to Alternating (the default), Left, Random, or Right. To deactivate the Offset options, uncheck the Use Offset Option in the selector, which sets the Offset measure to 0.

As with other Artistic Media tool modes, you can draw while applying this effect or apply an Artistic Media stroke to an existing line.

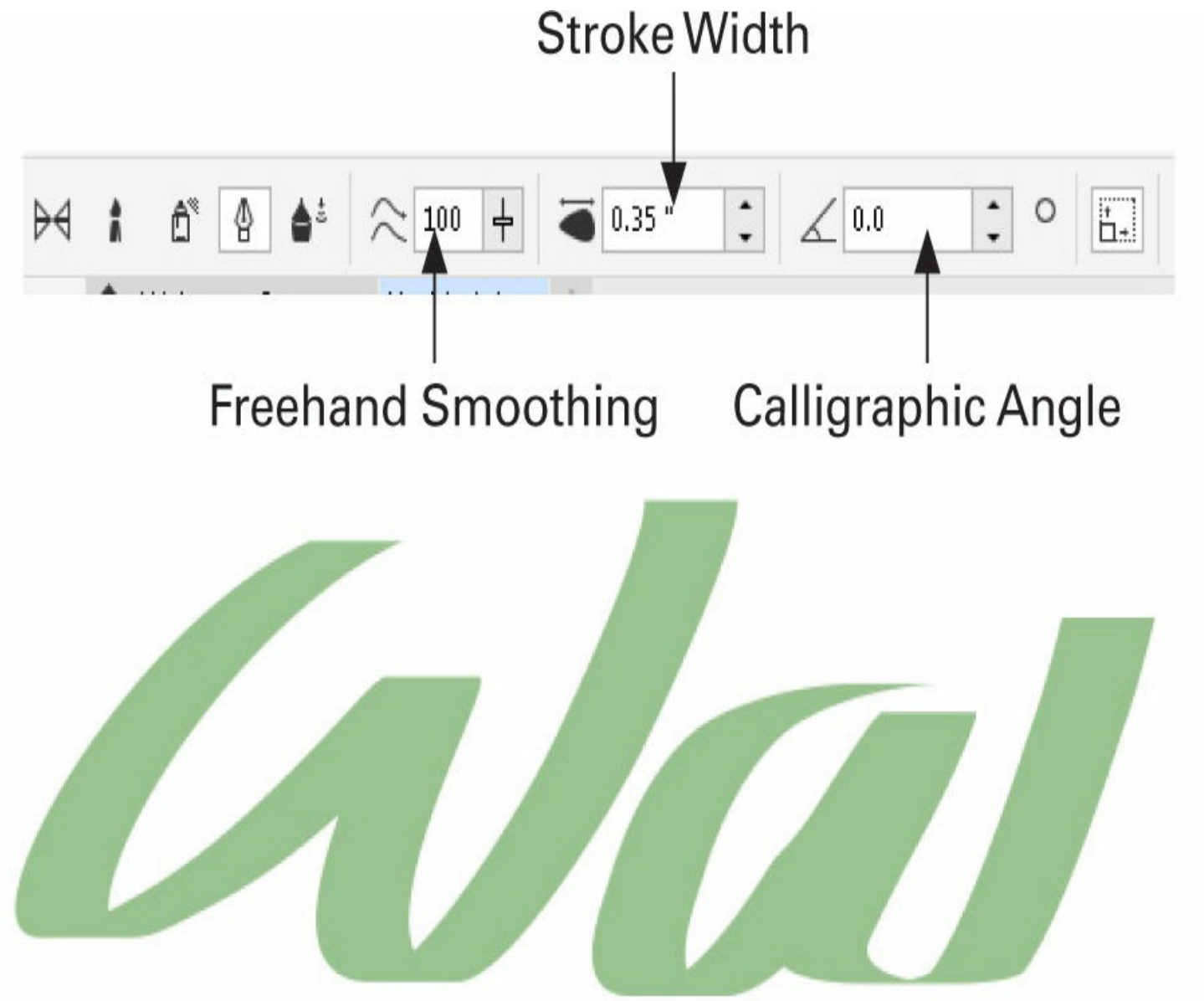
With a Sprayer style applied and the line selected, you can use Property Bar options to edit the effect. Doing this edits the style *only as it is applied to your line* and *not* the original style in the Sprayer Pattern List selector.

Tip To create your own Sprayer brush, first open the Artistic Media docker (Window | Dockers | Effects | Artistic Media). Create several shapes—they can be groups of objects, and they can contain any fill you like—and then arrange them horizontally on the page. Select them, and then click the Save button (the little diskette) at the bottom of the docker. You're then asked whether you want to save the selected objects as brushes (no) or as object sprayers (yes). Saving and choosing sprayers is almost identical to the way you save and use brushes.

Calligraphy Pens and Applying Media

The Calligraphy tool mode produces results similar to adjusting the nib shape with any regular Pen tool; however, you can dynamically change the width and angle when you use the Calligraphy tool. Additionally, your artistic approach with this tool is different from drawing paths—you click-drag to produce an entire stroke instead of click-dragging to set a node and a path segment.

You have three options on the Property Bar when Calligraphic is selected: Freehand Smoothing (the degree of accuracy when you click-drag), Stroke Width (which sets the *maximum* width because calligraphic strokes are alternately thick and thin), and Calligraphic Angle. Increasing values in this field rotate the stroke evaluated from the vertical in a counterclockwise direction. If you're a mouse user, you'll notice that strokes with the Calligraphy pen might not need any refinement work later. Your success depends mostly on how agile you are with a mouse and your click-drag technique.



Your experience with using a mouse, however, doesn't have to be an obstacle to creating elegant curves, handsome signatures, and other calligraphic designs. Follow this tutorial to learn how to apply a Calligraphic property—and any Artistic Media except Pressure—to an *existing* path.

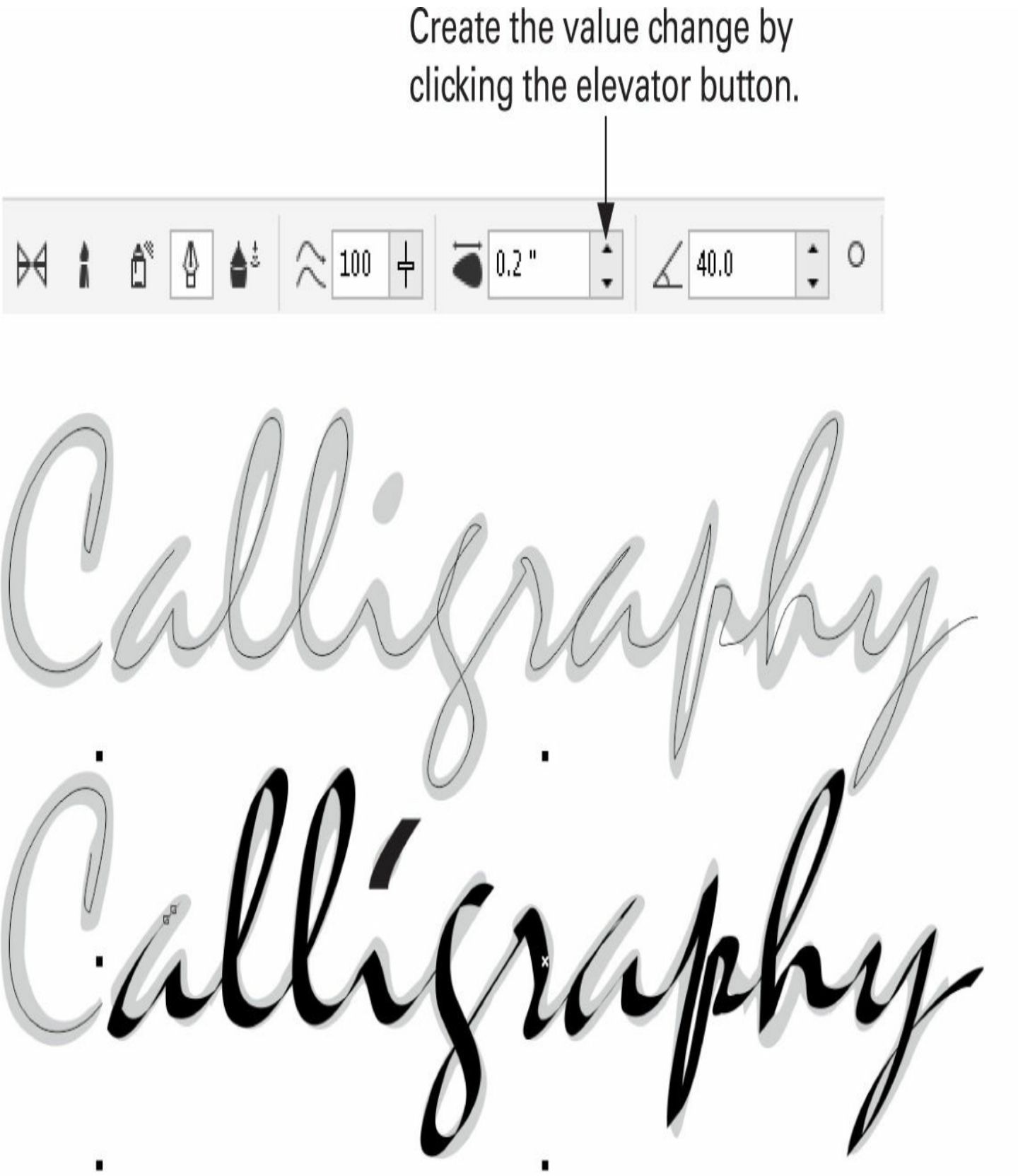
Defining and Applying Calligraphic Brushstrokes

Tutorial

1. Open the Calligraphy.cdr file. You'll see a thin centerline on the top, unlocked layer.

The bottom layer is just for reference. Mistal was used as the typeface and is a good example of calligraphic swoops, curves, and turns.

2. With the Pick tool, select the lowercase *a* after the initial *C*.
3. Choose the Artistic Media tool and then click the Calligraphic tool on the Property Bar. Do not deselect anything.
4. Here's the trick: click either the up or down elevator button to the right of the Stroke Width field (or type **.2** or **.1** in the field instead of using the elevator button). What you've done is get the calligraphic pen to "recognize" that you want to change a value of the selected path's calligraphic width. The change isn't important; it's the *recognition* that applies the Calligraphic property to the selected stroke.



5. Continue to adjust the Stroke Width setting (**.2"** works well at the path's scale here), and then play with the Calligraphic Angle option—anywhere from 35° to 55° looks good in this example.
6. Perform steps 2–5 with the initial *C*, and then with the brush, dot the *i*.

Pressure Mode

The last of the Artistic Media modes was created for digital tablet users; if you own a stylus and tablet, you can set up the drivers for the stylus to apply pressure, and CorelDRAW will read stylus pressure to vary the width of the stroke as you drag across the page. You have Freehand Smoothing and maximum Width controls on the Property Bar.

If you're using a mouse, you can use UP ARROW and DOWN ARROW on the keyboard as you drag to (respectively) increase and decrease the width of the stroke. Honestly, don't expect world-class art using the mouse and arrow keys; you might run into a design situation where you need to vary the width of a stroke, but there are other ways to edit an existing stroke that produce more refined results.

This chapter has taken you through simply assigning one property to a path to applying several, more complex properties to a path. As you gain a better understanding of the options in CorelDRAW, you add to your personal, creative wealth of design options. Dashed lines, arrowheads, and calligraphic strokes will come to your rescue during 11th-hour assignment crunches, just as other features will that have been covered in previous chapters.

Blends and contours are the topic of the next chapter; each has it own use. And you can actually take what you know now about filled objects from Chapter 12 and strokes from *this* chapter and do some ultra-exotic blending and contouring. Will it look weird? Yep. But also *interesting*. Just think of it as building on your knowledge!

14 Using Blends and Contours

Although they're different effects, blends and contours share the common trait of creating many shapes based on control shapes. The additional shapes are dynamically linked to the control object, and the "in-between" objects can vary in size, color, and outline shape, depending on how you set up the effect. Blends and contours are terrific for shading flat color fills in a way that fountain fills sometimes cannot. Additionally, blend objects can be used to illustrate the transition between two objects of completely dissimilar shapes. This chapter takes you through the use of blends and contours so you can create outstanding, intriguing work in addition to what you already know.

Blend and Contour Effects: Similarities with Distinctions

The Blend effects create a series of objects *between* objects using the number of steps you define—an object can be a closed path, a group of objects, or even a line (an open path). The properties of each step can be determined by the objects used in the blend (more on this later in the chapter). The Contour effect also creates additional objects in steps; however, only one object is used to produce a contour. When you imagine a Contour effect, think of a shape surrounded by the same shape radiating outward (or inward) in a concentric pattern, like the circular waves produced when you drop a pebble in a still pond. The following sections explain the properties of the effects you can manipulate, and then you can decide for yourself which effect to reach for when you need a complex graphic or a smooth, shaded fill in an illustration area.

Blending as Illustration Shading

If you've ever tried to add depth to a drawing but the Mesh Fill tool isn't working and a fountain fill doesn't do the trick, the solution is to blend a large shape through transition objects to a smaller object inside the large one. By making, for example, the outer shape darker than the inner one, you can position a soft-edged highlight on an illustration of a shiny object. Similarly, a contour can be used to create a highlight; however, the contour