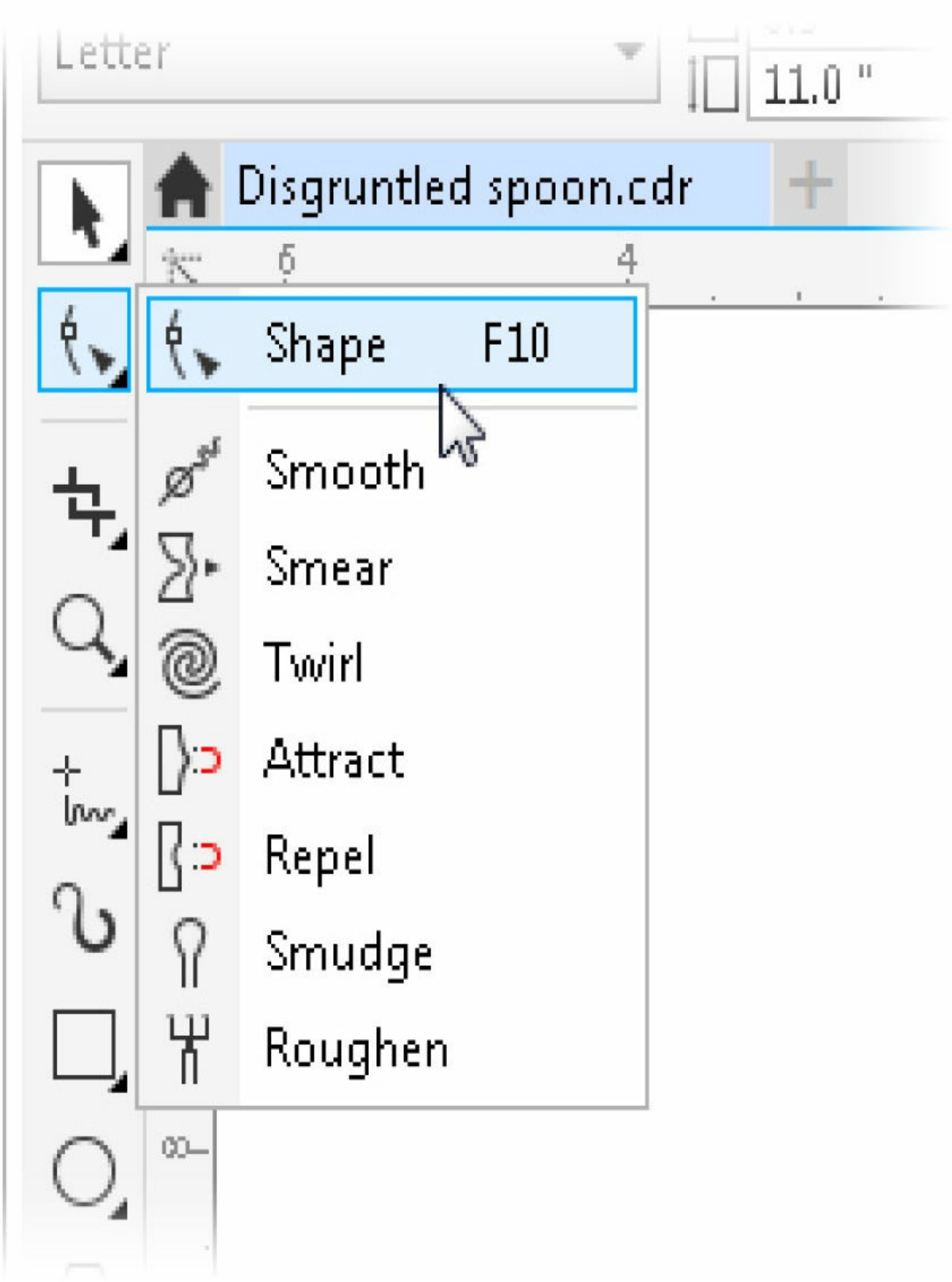
18 The Shape Editing Tools and Distortions

Once you've created an object, you might want to *edit* it, and that's the theme of this chapter. Whether it's a preset object you draw with the Rectangle tool, or manual design work with the Pen tools, not even a skilled illustrator is always satisfied with their first try. You'll learn various techniques in the pages that follow to massage that almost-perfect shape into *exactly* the shape you've envisioned. This chapter covers DRAW's tools and features for treating vector objects as though they're malleable in an organic way, and vector paths are as linear as a crumpled piece of paper. Often, creating an *approximation* of an object you need is a good first step. Then, with a pull here and a tug there, bulging an area or roughening an edge, you'll get quicker results than if you had built the object from scratch. You'll also see in this chapter that you can add visual complexity and embellishments that would be hard to achieve using other methods.

Note Download and extract all the files from the Chapter18.zip archive to follow the tutorials in this chapter.

The Shape Edit Tool Group

Within the Shape Edit group on the Toolbox, you'll find Smear, Twirl, Attract, and Repel. These are incredibly dramatic and powerful tools that will make you feel as though you're dragging your finger through wet paint. Let's begin a survey from top to bottom in this group: the Shape tool, at the top, is such a fundamentally important tool in CorelDRAW that it's covered in Chapter 9 and several other chapters in this book, but not in this one. The group is shown here; draw an object and get set to have a lot of fun.


Letter
11.0 "
Disgruntled spoon.cdr
6
4
Shape F10
Smooth
Smear
Twirl
Attract
Repel
Smudge
Roughen

Using the Smooth Tool

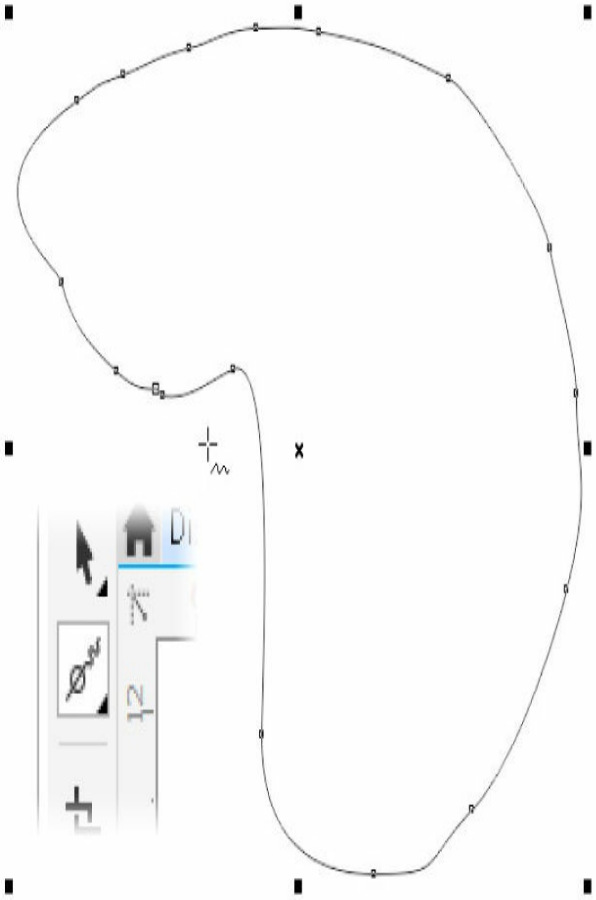
The Smooth tool can undo accidental bumps and curves you've inadvertently created along a path. It can be used to produce better results than selecting nodes with the Shape tool and then using the Reduce Nodes slider because you might want some areas to remain rough, while needing to smooth other areas. As a smoothing tool, it gives you complete control over which areas receive smoothing.

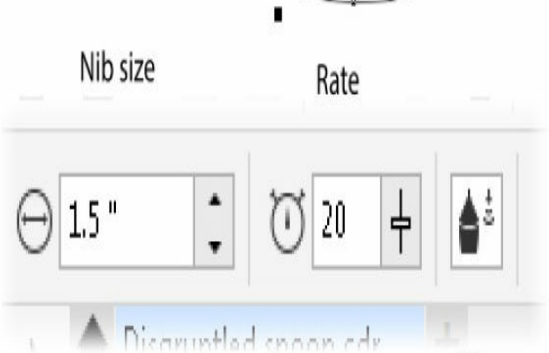
Three controls on the Property Bar govern how the Smooth tool works:

- **Nib Size** This control determines the size of your cursor.
- **Rate** This box determines how quickly the tool responds. At a fast rate (a high value), scrubbing over a path produces immediate results; the curve is smoother and usually there are fewer nodes. When the tool is set to a low rate, you can be more selective and leisurely about smoothing your object.
- **Pen Pressure** This option only works if you are using a tablet or a digitizing stylus. You set what pressure does with the tool. For example, you might want pressure set to determine the rate of the Smooth tool.

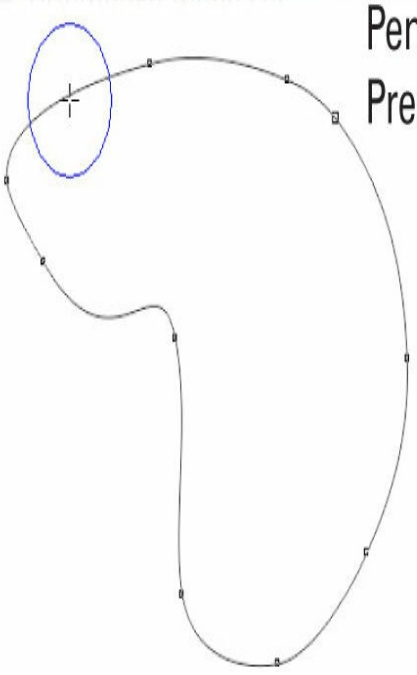
In the following illlustration you can see an example of the purposefulness of the Smooth tool. In the upper left is a design that was (unfortunately) drawn with the Freehand tool; the B-Spline tool would have been a better choice. At the bottom, you can see the Smooth tool at work over areas that need the most help to create this design of a kidney-shaped retro coffee table. On the right, the design is realized.

Smooth tool





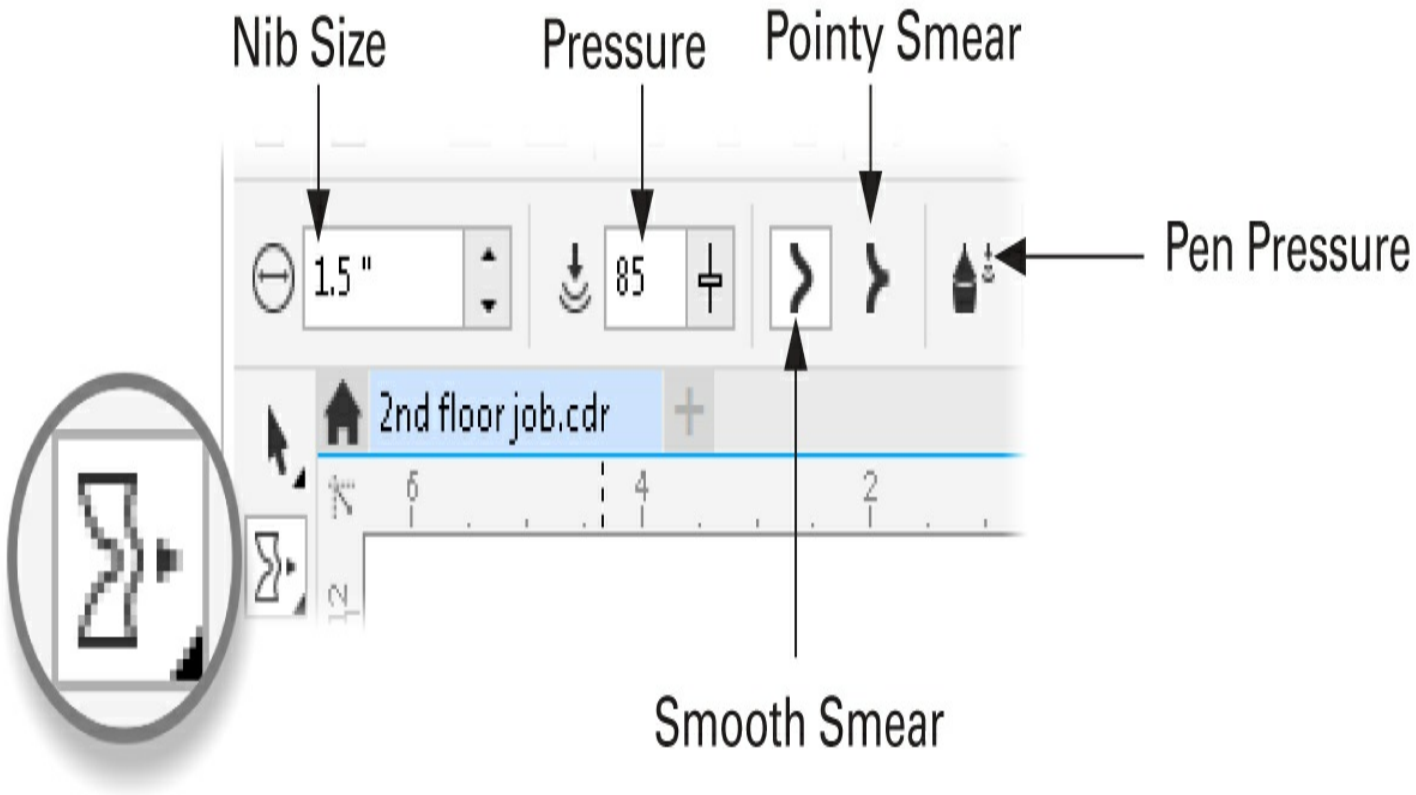
Pen Pressure



The Smear Tool

The Smear tool behaves like the Smudge tool's big brother (covered later). It offers more plasticity to areas you drag over and more control—and with a little practice, you can use a gallery of freeform shapes that look like anything but vector graphics. On the Property Bar, you have the following options:

- **Nib Size** Nib size determines the tool's diameter.
- **Pressure** Artists who use a mouse can use the num entry box or the flyout slider to set the tool's intensity.
- **Smooth and Pointy Smear buttons** Use one or the other type of smear to affect the end of a stroke. Smooth is good for natural, freeform distortion, whereas Pointy—an aesthetically severe effect—might be useful for embellishing machined parts and metal band logos.
- **Pen Pressure** Digitizing tablet users should click the Pen Pressure button to use physical pressure to add character to strokes.



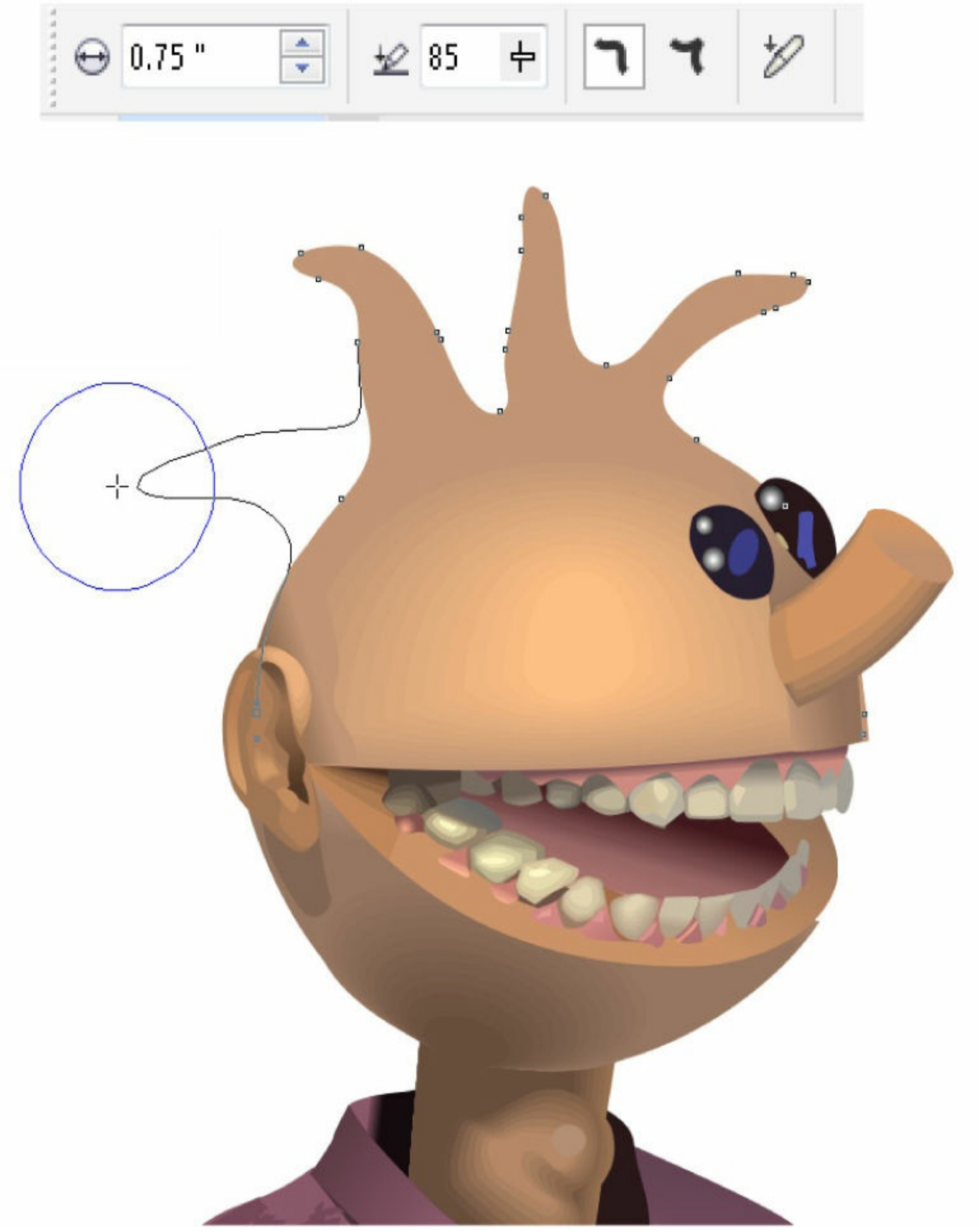
The Smear tool

In the following example, you'll get a feel for using the Smear tool in Smooth mode, to create a stylistic hairdo for a cartoon character who has no hair...yet.

Adding the Smear to Your Artistic Career

Tutorial

1. Open Cartoon Guy.cdr. Most of the drawing is on a locked Layer 1. The top of his scalp is on Layer 2, unlocked. Select the scalp object (press CTRL-A, which is the shortcut for Select All).
2. Select the Smear tool; set the size of the tool to about **¾"**, the Pressure to about **85%**, and the style of the Smear to Smooth Smear on the Property Bar.
3. There is no "right" or "wrong" in this example; you're just experimenting. Try dragging from the fellow's scalp upward. Then try dragging on the area you just dragged. Repetition over an area can lead to quite intricate shapes.
4. Set the pressure lower (say, to **35**) and drag from the scalp away toward the top. You might want to drag repeatedly over this area; a pressure of 35 creates a bumpy skull, similar to the author's, as attested to in this illustration.



5. Try the Pointy Smear type and setting the Pressure to **100%**, and when the fellow's

head is totally messed up, choose the Fill tool (toward the bottom of the Toolbox).

6. Drag from the base of the scalp upward and then click the start color node. When the mini pop-up color picker appears, click the down arrow to expand the box, click on the Eyedropper tool, and then sample a scalp color very close to where the start node is located.
7. Repeat Step 6, except choose the end color node and sample a medium mustard color for the hair. Adjust the start and end colors so a transition between scalp and blonde hair color is created. Figure 18-1 shows the finished piece. Write your boss's name at the top of the page, and then think twice about printing several copies, especially if you're on a network printer.

FIGURE 18-1 The Smear tool can quickly change parts of a path without the need to use the Shape tool.

The Twirl Tool

The Twirl tool has clockwise and counterclockwise direction features on the Property Bar, in addition to options for setting the pressure and size of the tool. Depending on the size and pressure, you can create just about anything from a sink drain to a gentle swash on a typeface character. You can also get creative and apply a twirl to objects that you've already modified with other Shape Edit group tools.

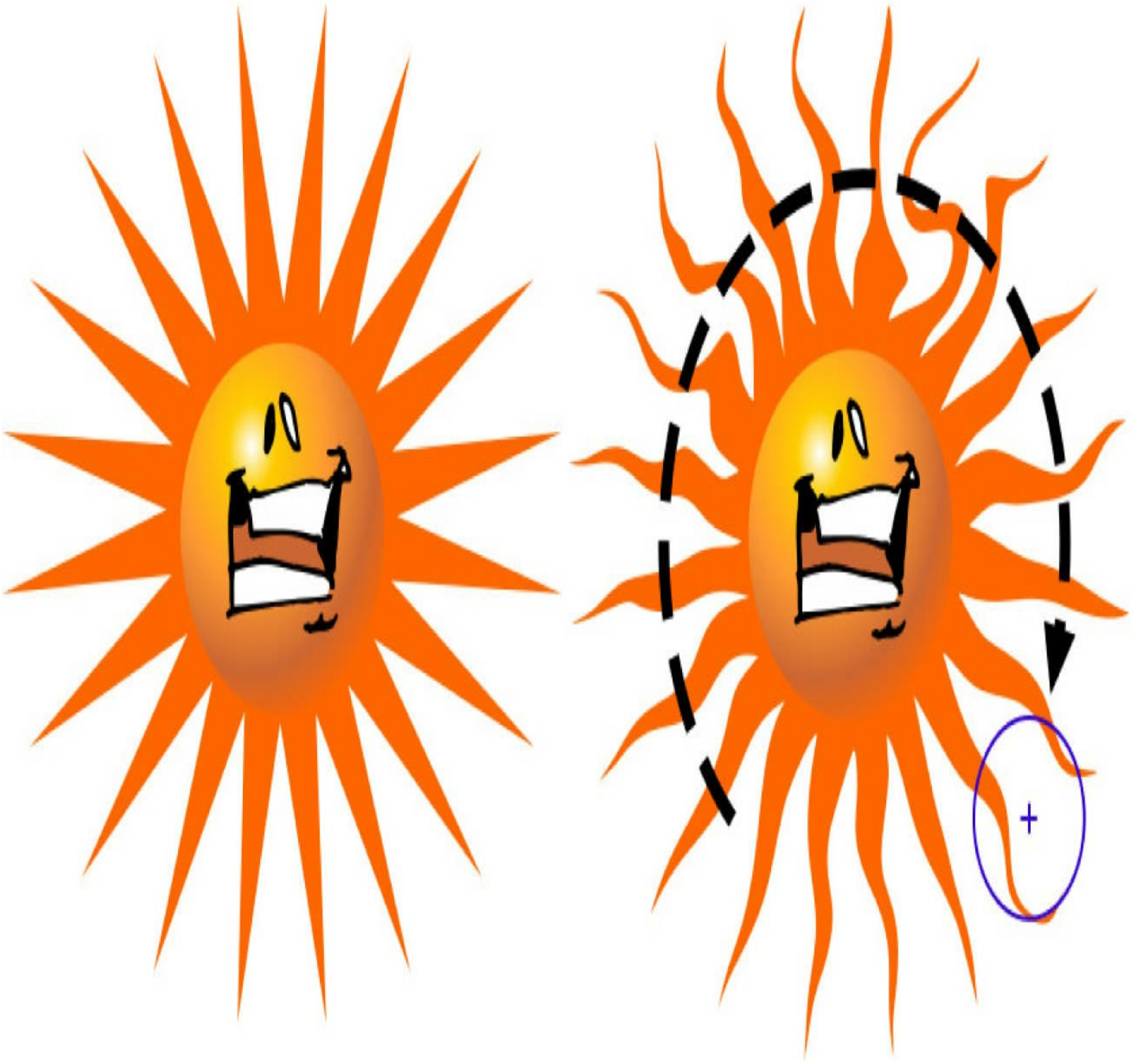
An unobvious technique to use with the Twirl tool—*and* the other Shape Edit tools—is to click, drag, and then hold the mouse button at the end of a stroke. Doing this increases the distortion at the end of the affected object and provides a novel effect.

Try this tool out to create a pinwheel effect in the following steps.

Creating a Stylized Sun

Tutorial

1. Open Suntoon.cdr. The sunbeam object behind the face is a polygon object whose outer points were dragged inward with the Shape tool, in case you'd like to build one in the future.
2. Select the polygon object and then choose the Twirl tool from the Toolbox.
3. Set the Nib Size to ½" so it scales with the drawing and set the Pressure to about **60**. It's your call whether to twirl the sunbeams clockwise or counterclockwise.
4. Drag in a circular direction around the sunbeam object, as shown in the following illustration. If you want to create a little solar flare action, remain over an area (don't drag, just hold) for a moment or two.



The Attract and Repel Tools

These two tools in the Shape Edit group might also be called the Pull and Push tools, because that is what they do when you drag them over a selected object. To add to their versatility, for example, the effect of the Attract tool depends on whether you begin on the inside and drag outward or begin on the inside and drag inward. Either approach is valid with the Repel tool as well. There's an additional trick you can use with either tool: click, drag just a little to start the tool's effect, and then *hold* over an area of an object. Doing this sort of turns the Attract tool into a "Pucker" tool—especially visible on corners of rectangles and other sharp turns in paths—and the Repel tool becomes a "Bloat" tool.

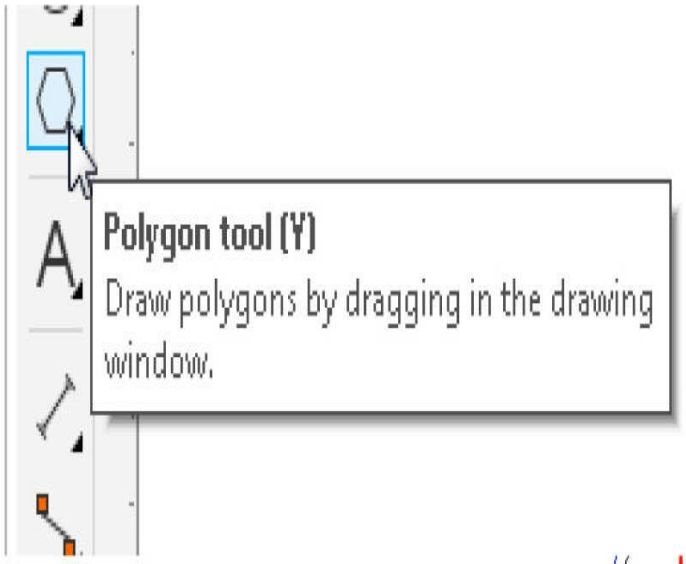
Try this simple exercise to get an idea of the power of the Repel tool on a star shape.

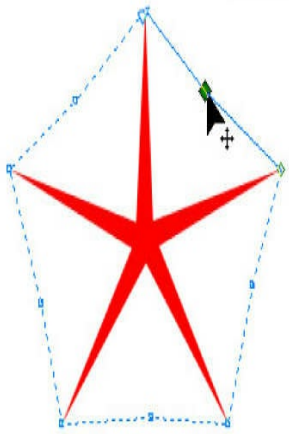
You'll turn it into an asterisk.

Repelling a Polygon Object

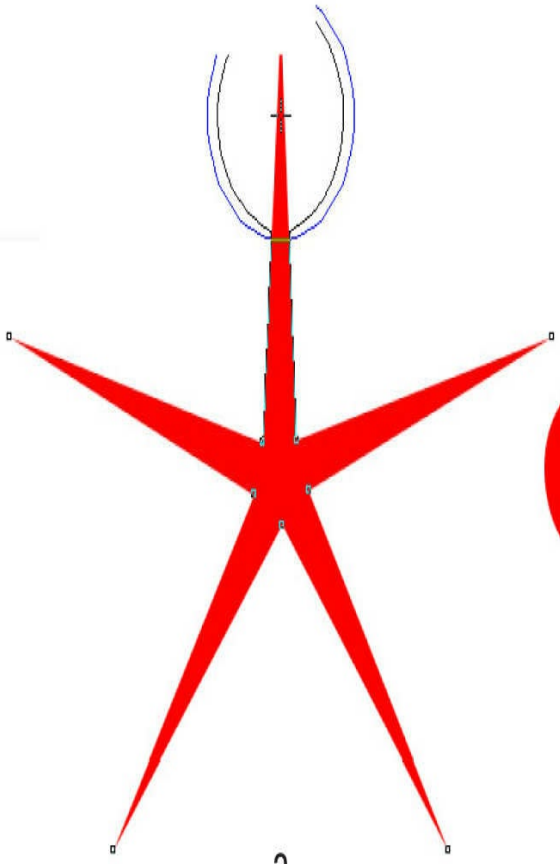
Tutorial

1. Choose the Polygon tool from the Object group on the Toolbox.
2. Hold CTRL to constrain the shape to symmetrical and then drag a shape that's about 3" across.
3. Press F10 to get the Shape tool and then drag the node that's at about 1 o'clock toward the center of the object until it looks like a very spikey star. Fill it with any color. See Callout 1 in Figure 18-2.

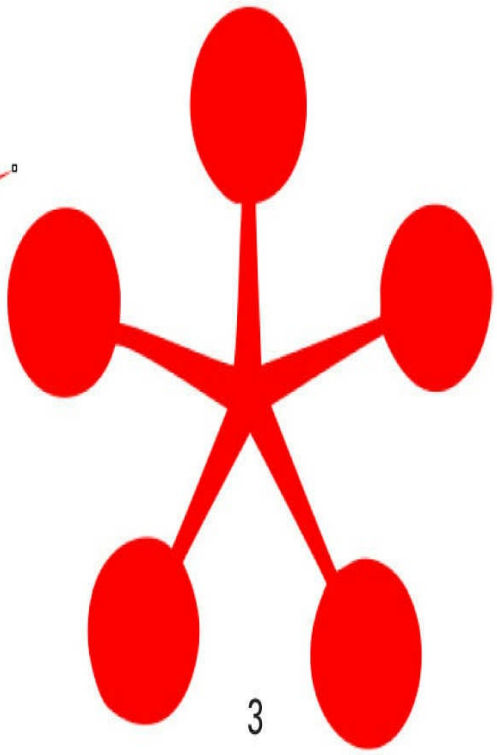




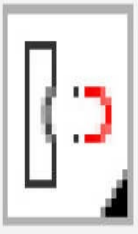
1



2



3



Repel tool

FIGURE 18-2 **The Repel tool can make a bulbous area on a sharp-cornered object.**

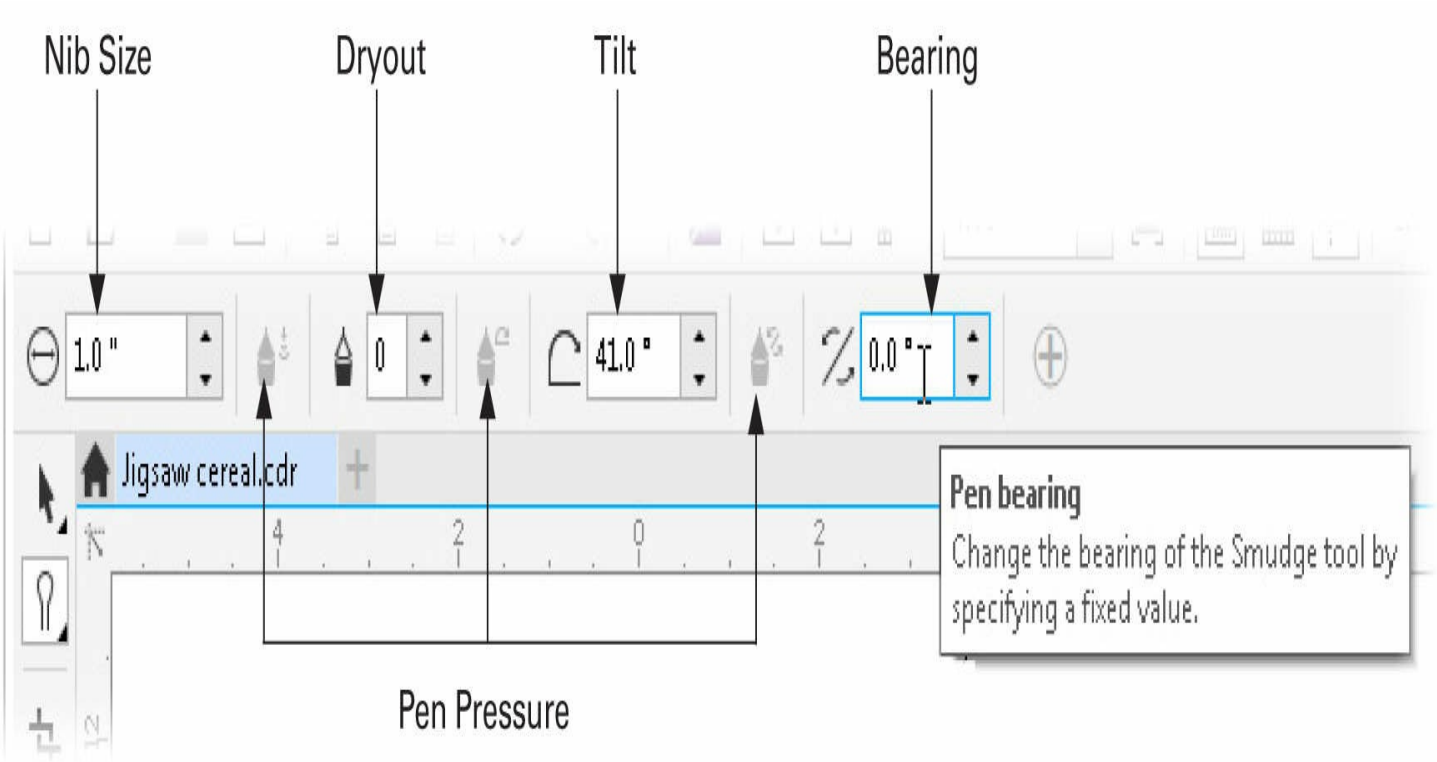
4. Zoom in and then choose the Repel tool. Set the size of the nib to about ½" and the pressure to about **55%**.
5. Position the cursor carefully so it's inside the tip of the top point of the star. Then click-hold the mouse button until the preview outline of the intended effect doesn't get any larger. See Callout 2 in Figure 18-2.
6. Repeat Step 5 with the other four points. Then find a sentence that claims a new car will get 500 miles per gallon, put the asterisk after that statement, and then give the copywriter the bad news.

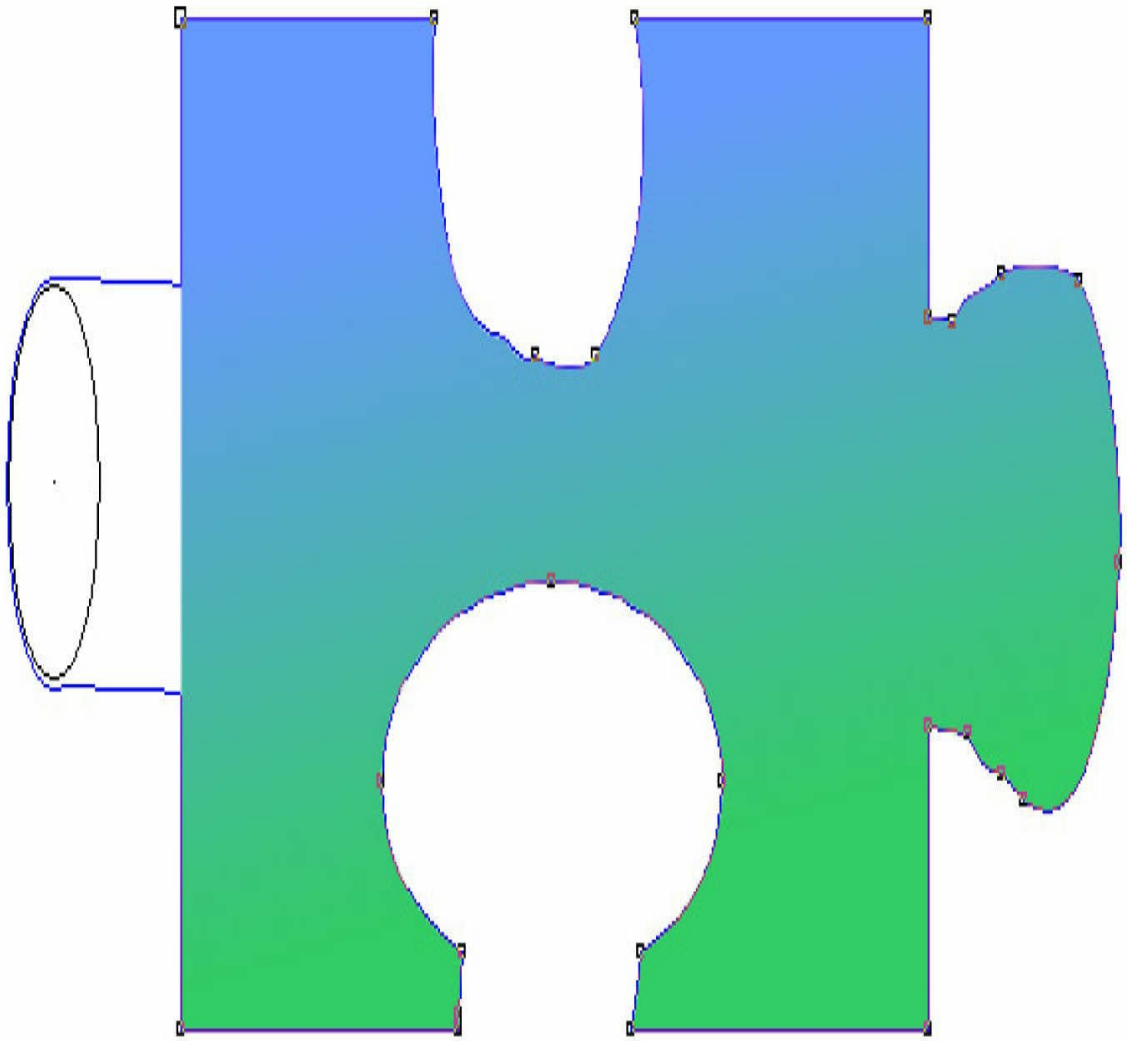
Using the Smudge Brush

The Smudge Brush is sort of a paint tool in a drawing program: you can dramatically alter shapes in a natural, painterly fashion, with results that would take hours using any other method. You move areas of a vector object by dragging from a starting point inside the object, dragging outward, or starting outside and dragging inside the object. The result is a little like the Eraser tool if you move object areas inward, and if you drag from the inside out, the result might remind you of dripping paint.

Applying Smudge to Shapes

Using the Smudge Brush, you can alter the outline shapes of open or closed paths by click-dragging across the outline path, in either an outward direction (to add to the object) or an inward direction (to create a recess in the object). As you drag, the path is altered according to your drag action and the shape settings of the Smudge Brush cursor. The following illustration shows a creative example of using the Smudge Brush: the rectangle is almost a puzzle piece now, the editing took less than five seconds, and the resulting path can be refined using the Shape tool or other CorelDRAW features.


Nib Size
Dryout
Tilt
Bearing
1.0 "
0
41.0 °
0.0 °
Jigsaw cereal.cdr
Pen bearing
Change the bearing of the Smudge tool by specifying a fixed value.
Pen Pressure



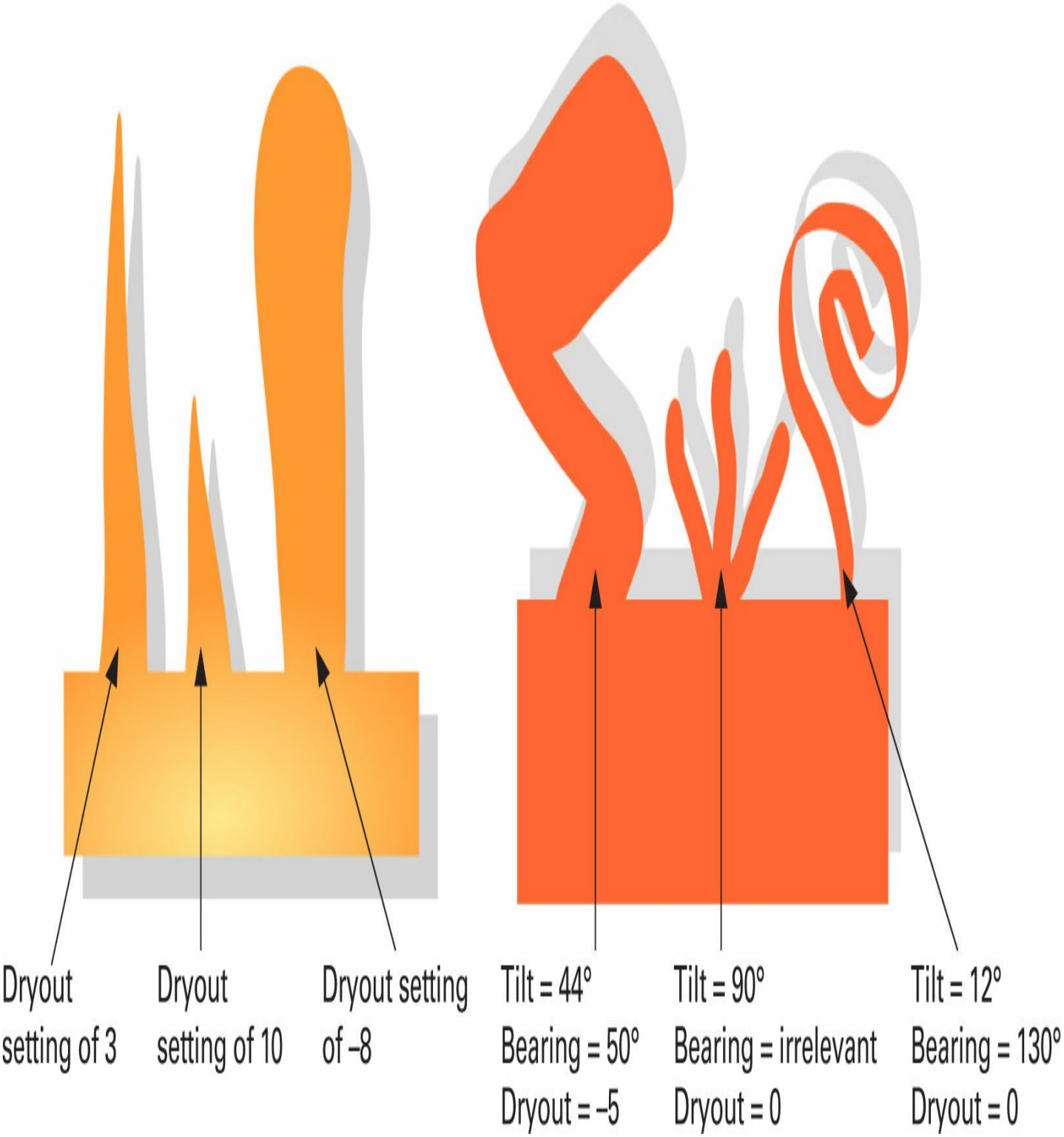
Tip As of version X8, you can now smudge shapes that have been applied with an effect (Envelope, Blend, Contour, Distortion, Extrude, or Drop Shadow). Smudging cannot be applied to objects in a group, bitmaps, or mesh-filled objects.

Choosing Smudge Brush Property Bar Options

The Smudge Brush works quite differently from other tools. You can control how the Smudge Brush effect is applied by varying tool properties such as the tilt, angle, and size of the nib; by adjusting how quickly the effect diminishes; or by using optional pressure settings, which are unavailable unless you are using a stylus and tablet.

While the Smudge Brush is selected, the Property Bar offers these options for controlling the shape and condition of your Smudge Brush cursor:

- **Nib Size** Nib Size can be set between hundredths of an inch up to 2 inches.
- **Pen Pressure** If you have a digitizing tablet and stylus that supports pressure, choose this option to have the Smudge Brush react to pressure you apply, increasing the width of the nib.
- **Dryout** This option sets a rate for the effect of gradually reducing the width of a smudge according to the speed of your click-drag action; it can be set between –10 and 10. Higher values cause your smudge to be reduced in width more quickly (as shown next), whereas a setting of 0 deactivates the Dryout effect. Interestingly, negative Dryout values make your stroke begin small and eventually widen as you click-drag.
- **Tilt** The Tilt value controls the elliptical shape of the Smudge Tool nib. Tilt is measured in degrees set between 15 (a flat-shaped nib) and 90 (a circular-shaped nib), as shown here. Tilt and Bearing values (discussed next) work in combination with each other to control the smudge nib shape.
- **Bearing** Bearing lets you set the angle of the cursor in circular degrees (0 to 359). The effects of changing Bearing are most noticeable at lower Tilt values—such as 15°, as shown here. It's the rotational angle of a *noncircular* tip.

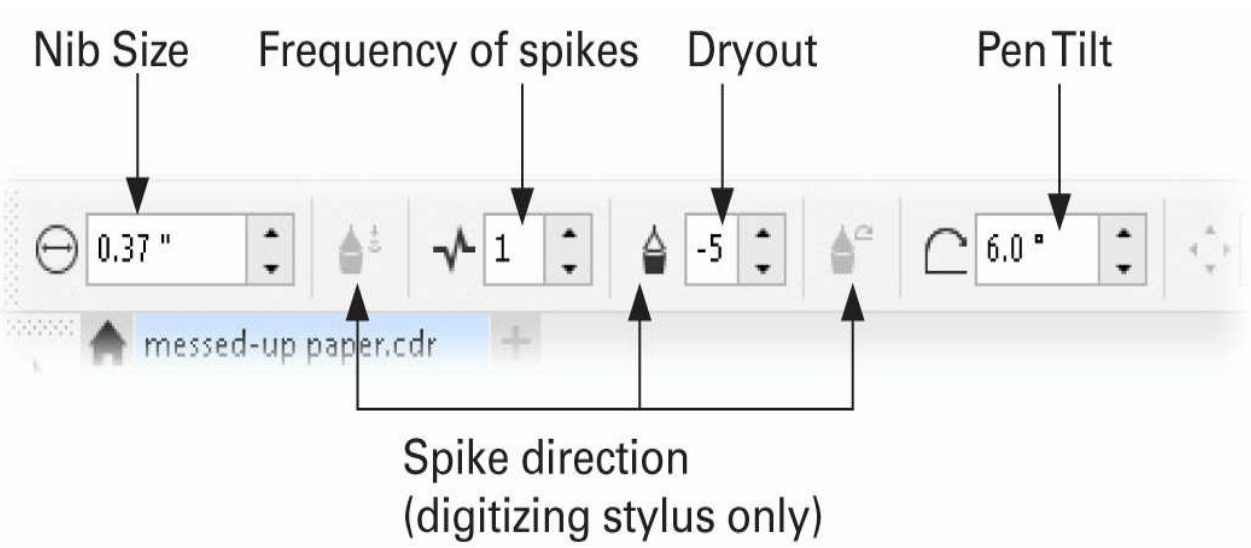


The Roughen Brush

To add a touch of character and imperfection to ultra-precise objects, you have the Roughen Brush.

The Roughen Brush alters the course of an outline path on an object, and depending on the setting you use on the Property Bar, you can achieve effects that range from lightning bolts to really gnarly lines to zigzag patterns, just by dragging on the edge of a shape. The

options you have when using the Roughen Brush can be seen here on the Property Bar. They're similar to those of the Smudge Brush:


Nib Size
Frequency of spikes
Dryout
Pen Tilt
0.37 "
1
-5
6.0 °
messed-up paper.cdr
Spike direction
(digitizing stylus only)


PLEASE
RECYCLE
USED PAPER

- **Nib Size** This sets the size of the Roughen Brush. It's usually a good idea to scale the nib in proportion to the selected object you want to roughen. By default, the scale of the nib is measured in inches.
- **Frequency** You'll see that the Roughen Brush creates irregularity on an object edge that is similar to the peaks and valleys of a mountain range—it varies the object outline in an "in and out" fashion. With low frequency values, the roughened object outline features large, varying areas. With high frequency settings, you attain a zigzag effect. The range of frequency is from 1 to 10 (10 produces zigzags).
- **Dryout** Like the Smudge Brush, the Roughen Brush can "dry out" at the end of a stroke you drag with the cursor. The range of Dryout effect is from –10 (the stroke tapers in the opposite direction in which you click-drag) to 10 (the stroke tapers and fades). At 0, the stroke remains consistent. The greater the Dryout setting (negative or positive), the more natural a roughened appearance you can achieve.
- **Tilt** This property can be used in combination with stroking over areas that have already been roughened. At 0°, Tilt increases the irregularity of the spikes, often to a point of abstract, amateurish artwork. However, at high Tilt settings (such as 90°), dragging over an area that's already roughened can smooth out some of the jagginess and add a subtle, organic feel to a path segment.
- **Direction of spikes** This feature is, by default, set to Automatic; it is not editable unless CorelDRAW is told (in Options) that you are using a digitizing tablet that supports pressure/direction. In default mode, spikes run on a tangent to the path you modify with the tool.

Try this basic tutorial to get a feel for the tool and learn a creative way to use it.

Roughing Out a Pumpkin's Smilie

Tutorial

1. Open Jack O Lantern.cdr. All objects except for the crescent moon smile are locked on Layer 1, and Layer 2 is chosen and unlocked.
2. Select the smile object (press CTRL-A to save choosing the Pick tool).
3. Choose the Roughen Brush and then on the Property Bar, set the Nib Size to **½"** (for shark-scaled teeth—use a smaller size for less intimidating jaws). Set the Frequency to **1**, the Dryout to **0**, and the Tilt to about **8°**, in case you want to modify the toothy smile after you've completed the next step.
4. Drag the cursor over the top edge of the smile object, but start about ½" from the absolute left and end ½" before the right side. The Roughen Brush tends to mess up

path areas where there is a sharp change in direction.

5. Perform Step 4 on the bottom smile object. Optionally, you can duplicate the smile object (select it and then press CTRL-C and then CTRL-V), fill it with yellow on the Color Palette, press SHIFT-PAGEDOWN to put the object behind the black smile, and then use the nudge keys up and left to offset its position, creating a highlight to the carved effect, as the pumpkin's eyes display in Figure 18-3.

FIGURE 18-3 **Creating an effect similar to a tailor's pinking shears with the Roughen Brush.**

Mastering Distortion Effects

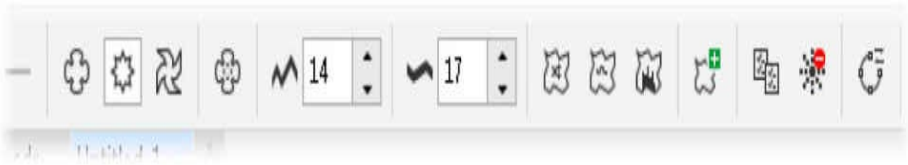
The Distort tool in the Effects group on the Toolbox has three modes of operation, each producing a different effect you can also customize; plus there's a Preset selector on the Property Bar to get you introduced to some wild effects. The Distort tool and options are also *dynamic*, which means they create distortion without ruining your original. Distortion properties can be edited at any time, and they can be cleared from your shape, just like Envelopes. This "undo" property makes the Distort tool unlike the Shape Edit tool group discussed at the beginning of this chapter.

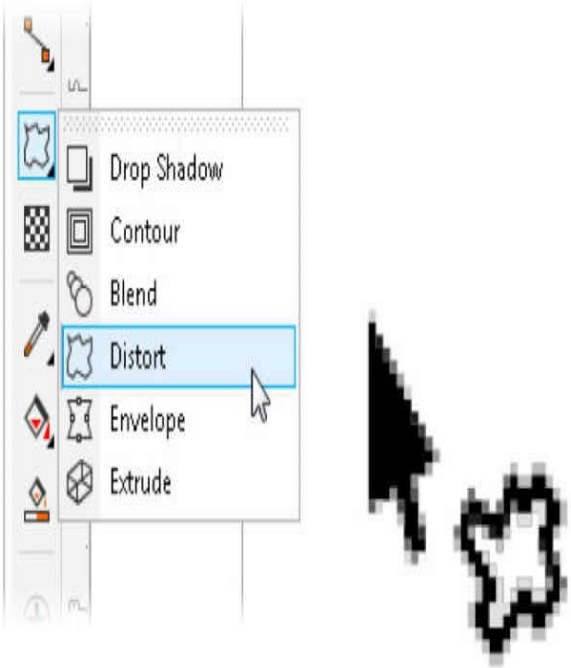
Distortion effects also change your object without affecting its other properties, such as outline width and fill. Using distortion, the curve values and node properties are dramatically changed, and the more complex your object is to begin with, the more dramatic the Distortion effect will be. Adobe Illustrator users will feel right at home; although distortions are similar to Punk & Bloat, they go beyond this effect in variety and complexity, and when you're using CorelDRAW distortions, you can restore your objects at any time. Distortion effects are great for a number of illustration challenges, including organic-type effects. You can create flower shapes, zippers, swirly galaxies in space—not even the sky's the limit.

Using the Distort Tool and the Property Bar

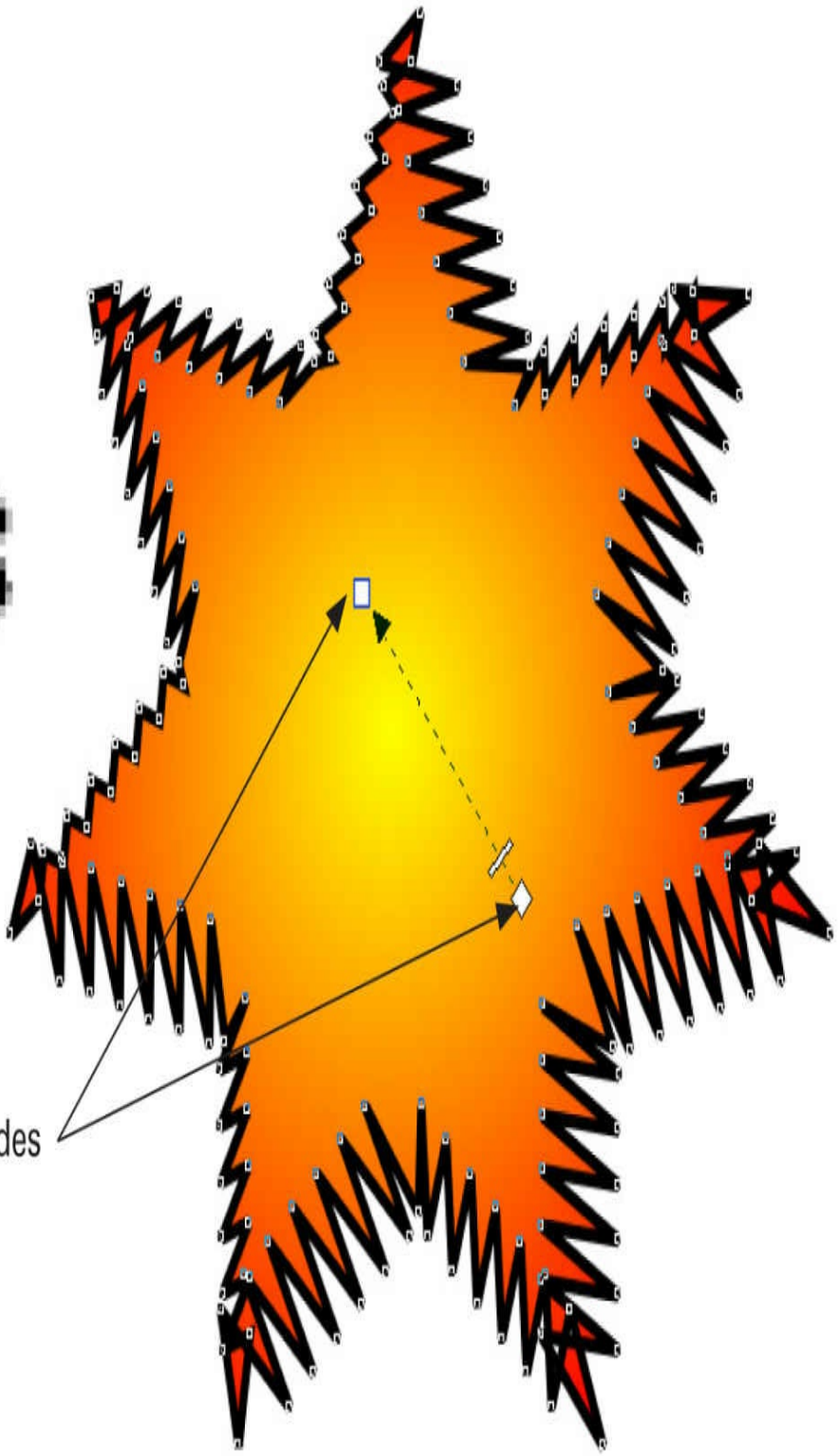
Apply your distortions using the Distort tool, shown next, which is found in the Toolbox grouped with other effects tools and is used together with these Property Bar options.

Property Bar options for distortion

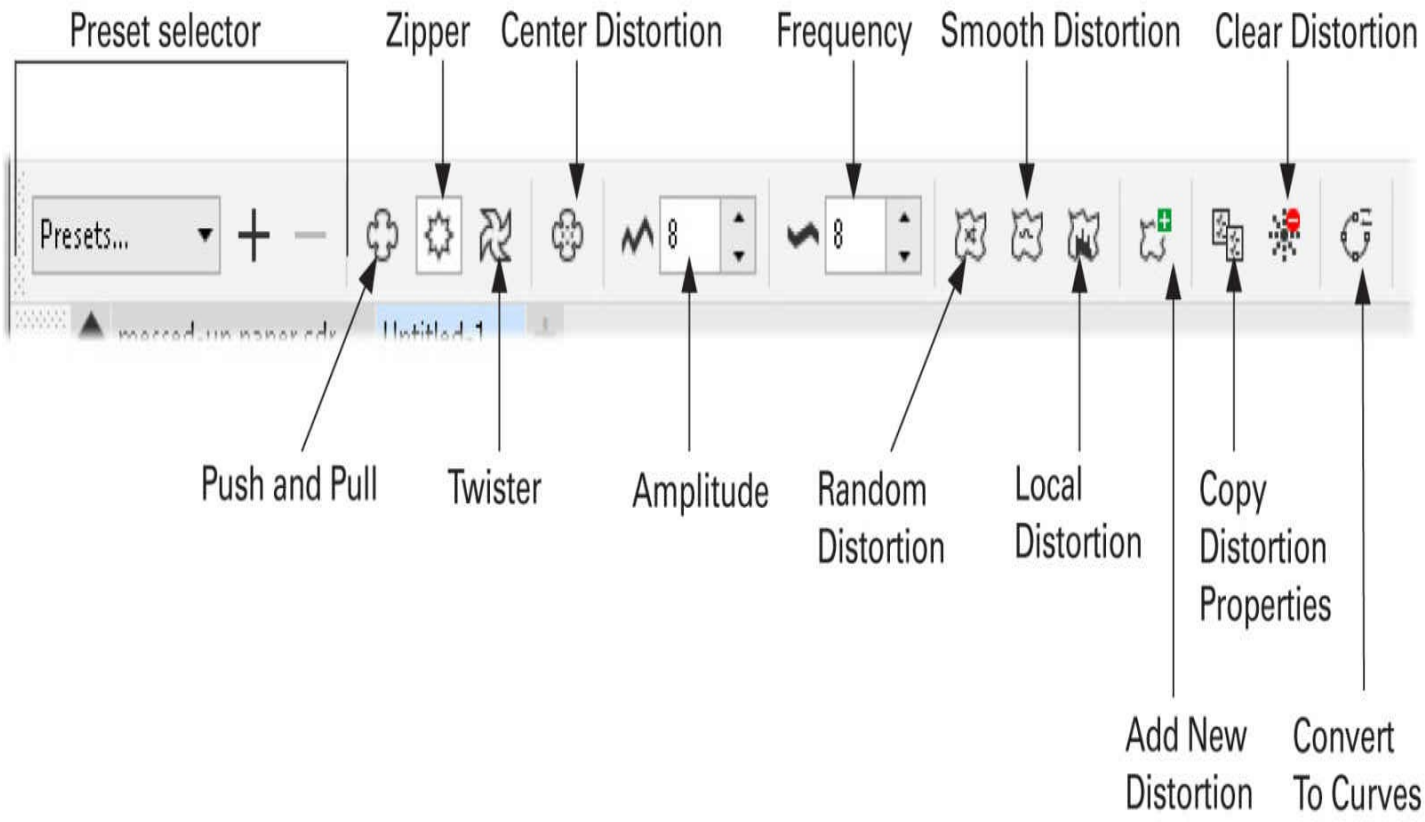


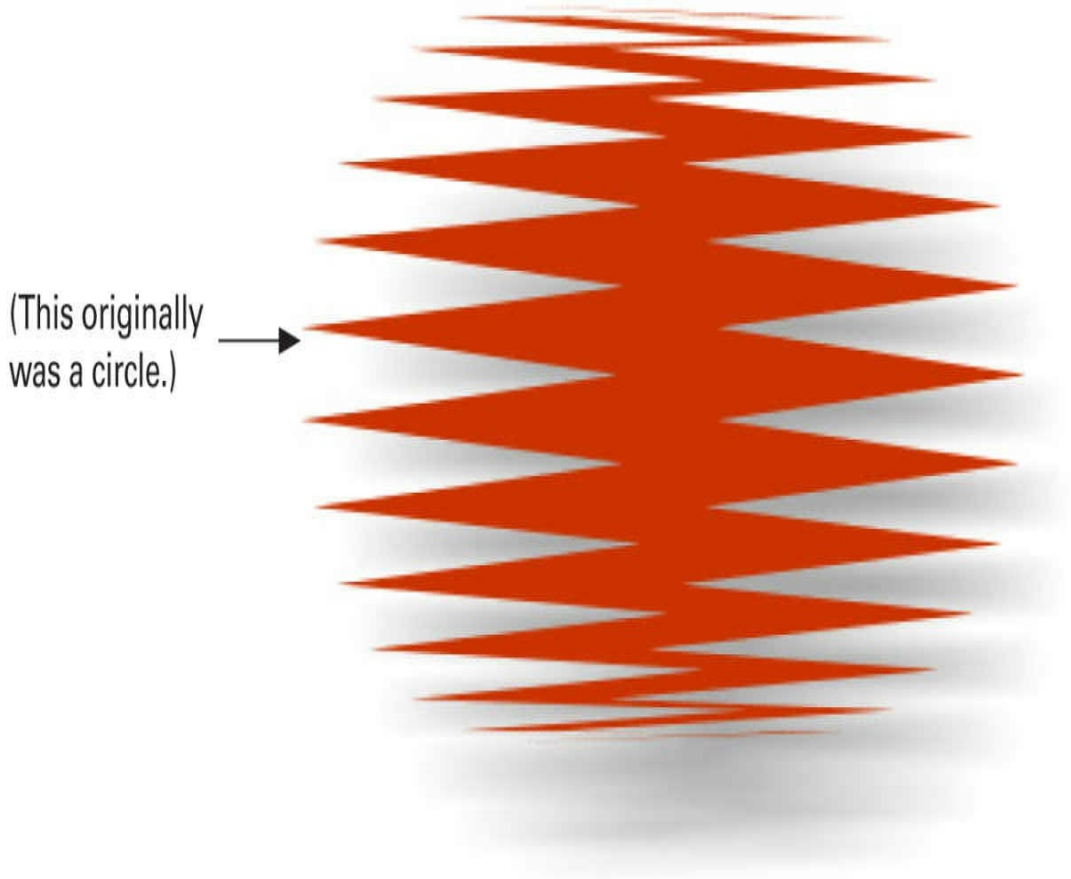


Distort tool and cursor



You'll notice three distortion modes: Push and Pull, Zipper, and Twister. With each mode, a different set of parameters is available. Amplitude and Frequency values can be varied in combination with certain other options (covered next) controlled interactively, or you can set these values on the Property Bar. Let's first take a look at the Property Bar when one of the modes, Zipper distortion, is chosen. All three modes offer slightly different options, but by reviewing Zipper mode, you'll get a handle on many of the options.


Preset selector
Zipper
Center Distortion
Frequency
Smooth Distortion
Clear Distortion
Presets...
8
8
Push and Pull
Twister
Amplitude
Random Distortion
Local Distortion
Copy Distortion Properties
Add New Distortion
Convert To Curves


(This originally was a circle.)

Choosing Distortion Modes

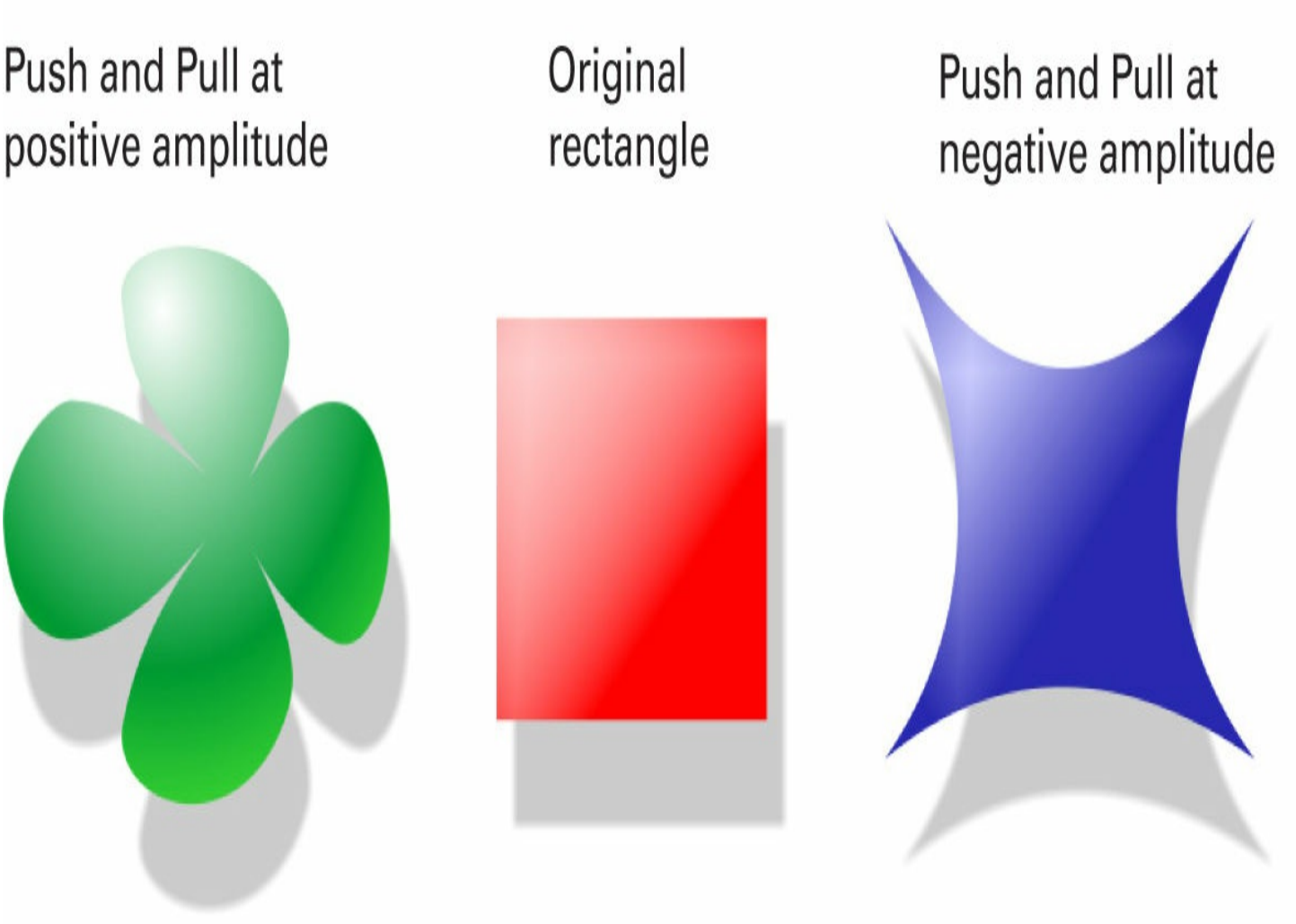
If you've tried using the distortion effect, even just a little, you probably have a newfound appreciation for "steering" this effect—it's akin to slipping into a Ferrari right after your dad took the training wheels off your bike. However, the Distort tool will grow on you, and the intimidation factor will dwindle.

During a distortion session, interactive nodes (markers) provide much of the control over this effect. The nodes vary by the mode selected. The Distort modes are covered in the sections to follow in digestible, easy-to-assimilate, fun-size servings.

Push and Pull Distortion

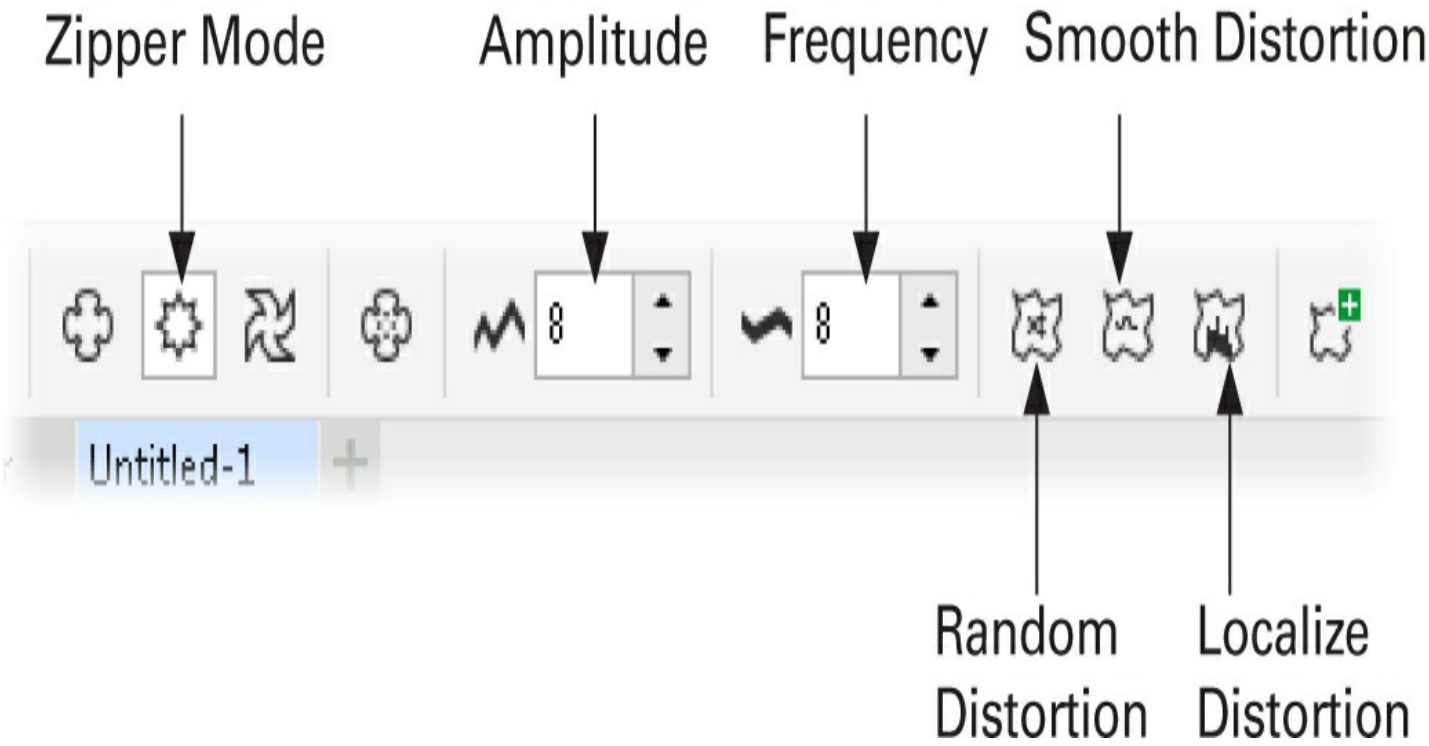
Push and Pull distortions can inflate or deflate the slope of your shape's curves by amplitude. The *amplitude* value affects the *extent* of the effect, moving the curves of paths from an object's original path from shallow at low settings to severe at high settings. Think of an oscilloscope when you use these effects—it's all amplitude and frequency.

Amplitude can be set from 200 to –200 percent. Negative values cause the effect to distort the path away from the center origin of the object, which creates the "push" condition of the distortion. Negative values (which you can also define interactively with the Distort tool—it's fun and creatively therapeutic) can be used to illustrate flower petals, a cartoon splash into a pond, a thought balloon—all from beginning with a rectangle shape. Positive amplitude values cause the effect to be distorted toward the object's center origin, the "pull" condition. Again, if you use a rectangle as the target shape, you can almost instantly produce anything from a 1950s diner sign to a sleek, aerodynamic automobile or airplane, to a nice 3D visualization of a TV tube viewed in perspective. At an amplitude of 0, there is no distortion. Here, you can see the effects of both negative and positive Push and Pull amplitude settings.

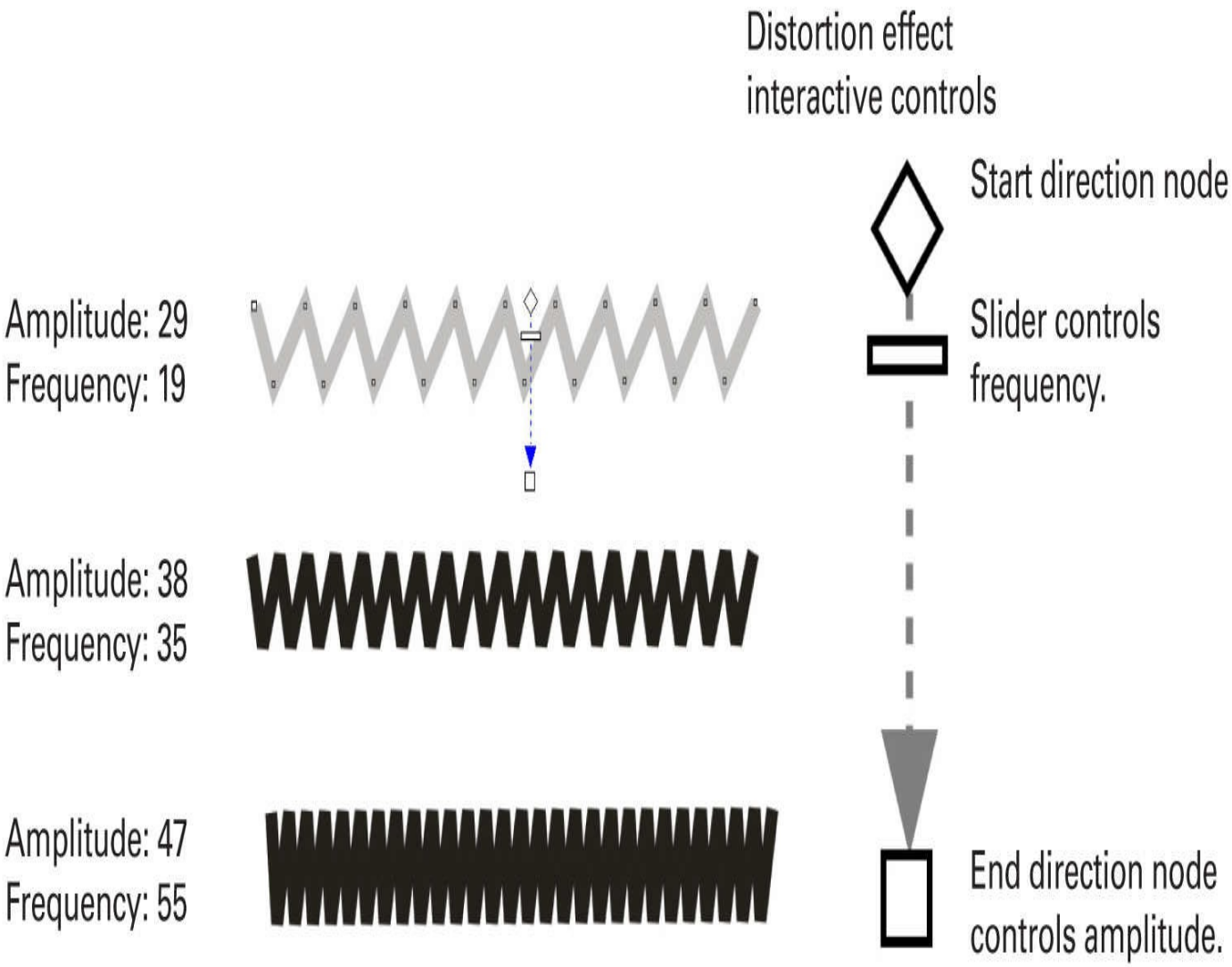


Zipper Distortion

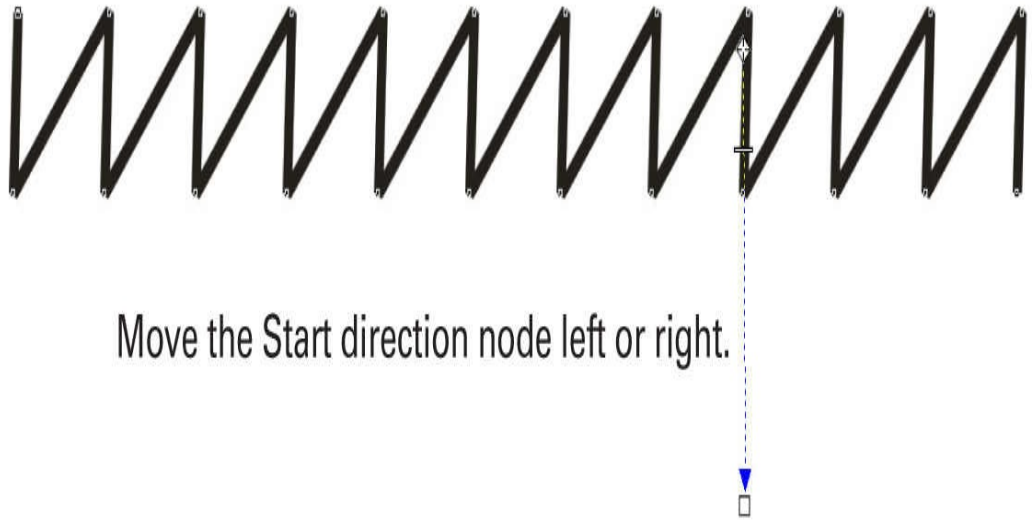
Zipper mode distorts the paths in your object to resemble a zigzag or stitching pattern. Here, amplitude can be set between 0 and 100 percent and can be used together with a frequency value and options for Random, Smooth, or Local distortion, as shown here:



Interactive markers are made up of an outer marker controlling the amplitude and a slider controlling frequency, which enables you to set the number of zigzags within a given distance. Both can be set within a range of 0 to 100 percent. You can see the dramatic effects of various amplitude and frequency values for a Zipper distortion in the next illustration. When beginning to work with the Distortion effects, you might prefer to use only the Property Bar to define an effect, but as you grow more comfortable with Distortion you'll surely want hands-on control by dragging the control handles directly with your cursor.



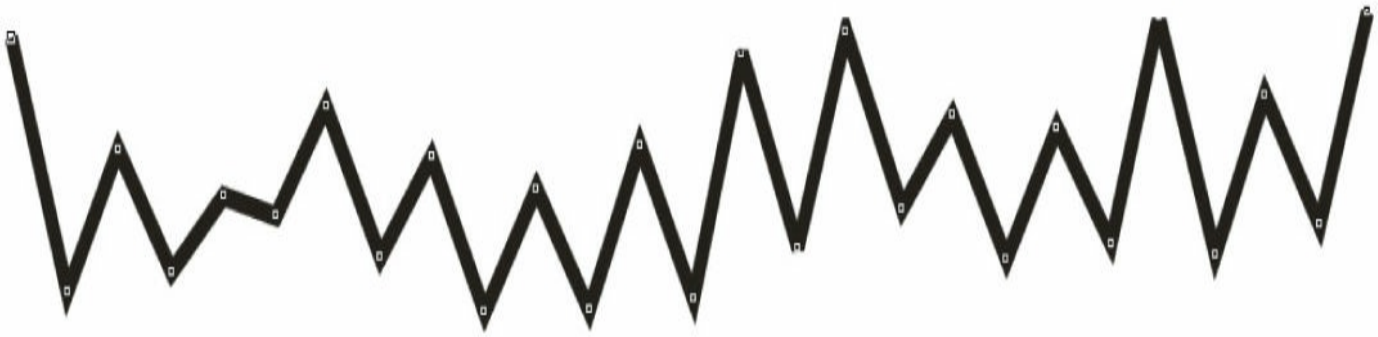
After the effect has been created, you can slant the zipper line by dragging the Start direction node vertically, left or right, as shown here:



Tip You can invert the direction of the zigzags on a line or closed shape by repositioning the control handles for the effect. For example, begin by placing the Start and End handles so they bisect the line that is affected. Then arrange the handles so both are above the line; notice where the peaks and valleys are on the line. Now move the Start and End handles so they're below the affected line. You'll see that where there were peaks there are now valleys, and vice versa.

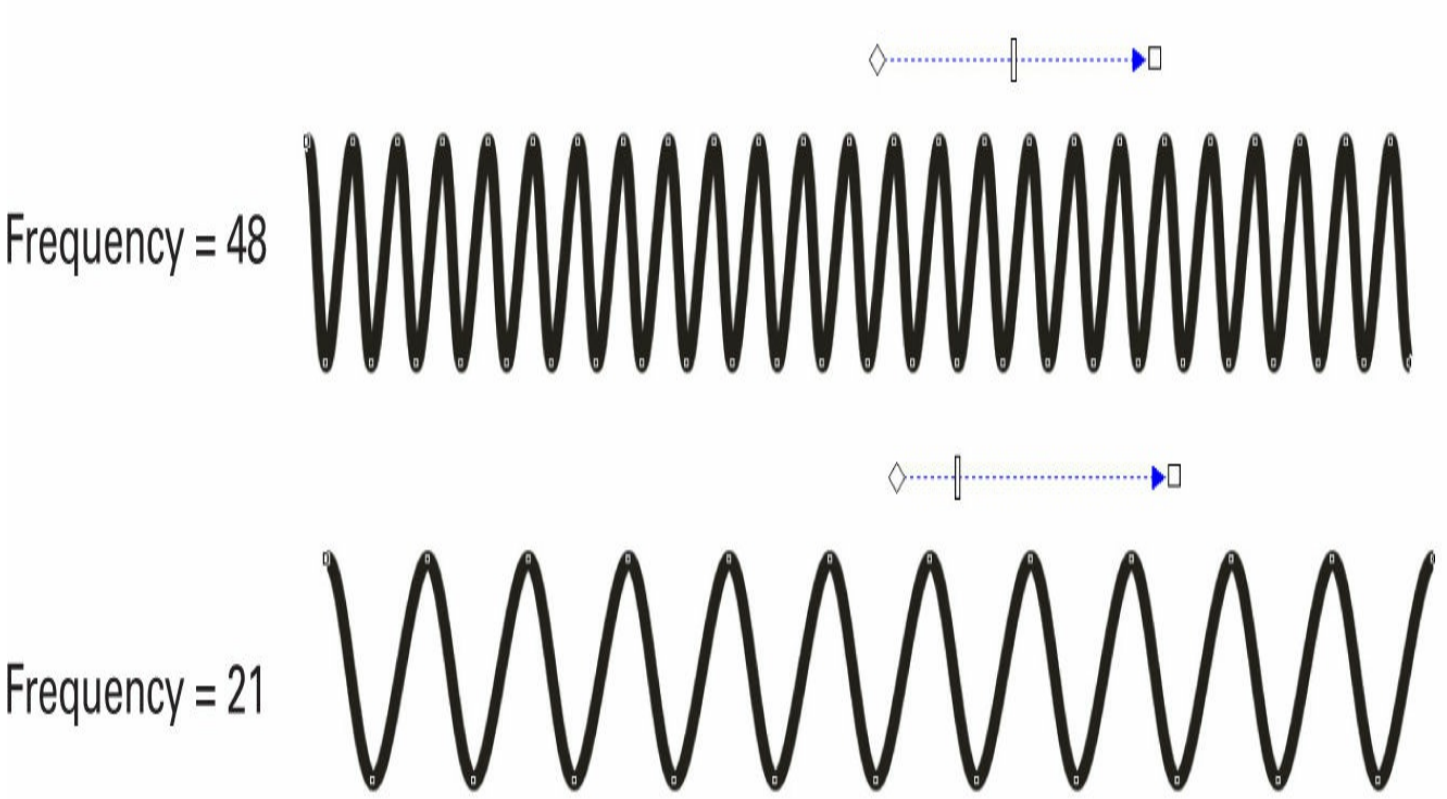
In addition to amplitude and frequency, three other options are available for setting the shape and size of the zigzags. Each can be toggled on or off, so you can mix and match to create the following effects:

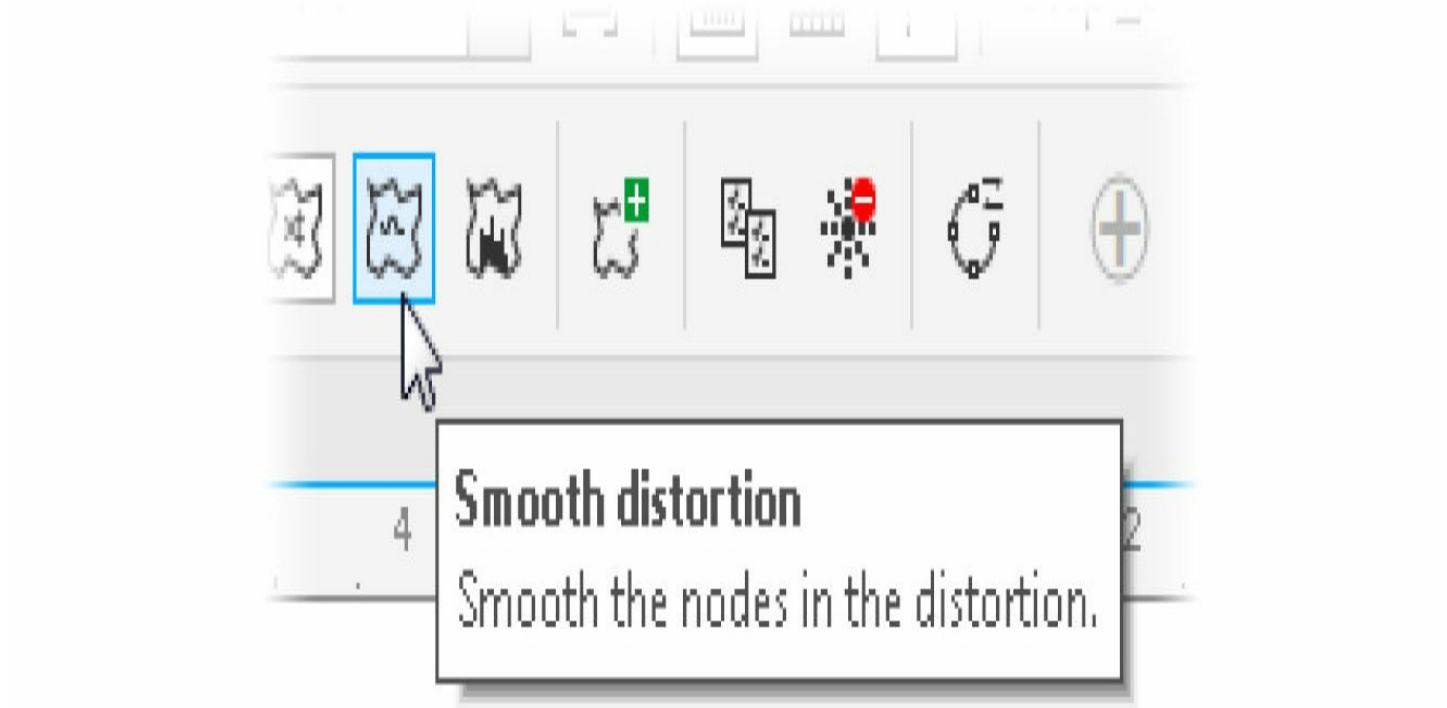
- **Random** Choosing the Random option causes the zigzag Zipper distortion on your object's path to vary randomly between the current Amplitude values and zero. This creates the appearance of nonrepeating frequency and varied wave size, resulting in an uncontrolled distortion appearance. In the next illustration, you can see examples of Random set at 25 and then at 74. Notice where the interactive frequency marker is on the controls just above each object. You can slide this control instead of entering values on the Property Bar.



- **Smooth** While the Smooth option is selected, the cusps of the zigzag Zipper distortion become rounded, instead of the default sharp corners normally seen. This is a great

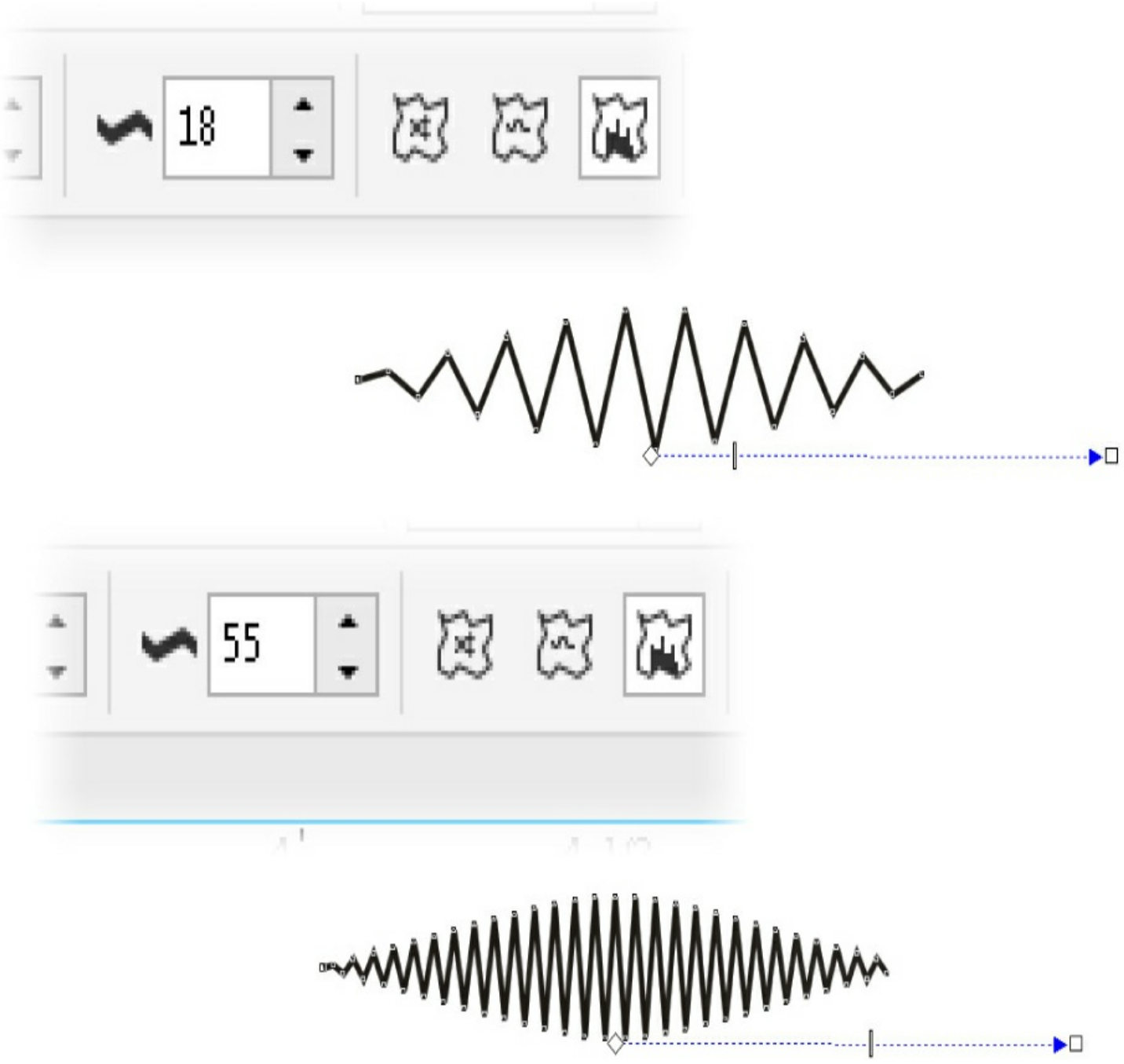
option if you need to simulate sound-wave frequencies and equipment monitors in hospitals. The next illustration shows *constant* (Random is toggled off) amplitude and variations in frequency when the Smooth option is active.





- **Local** Using the Local distortion option has the effect of varying the Amplitude value

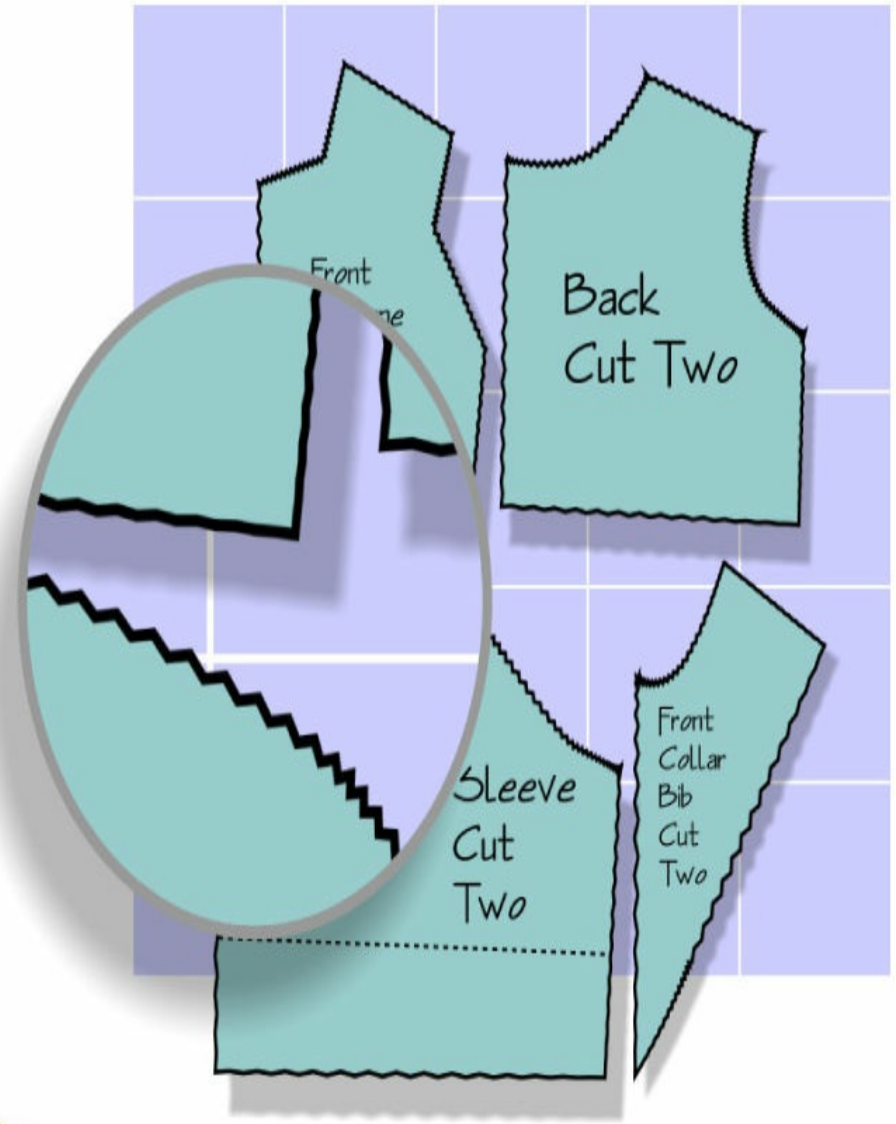
of your Distortion effect around the center origin. At the center of the Distortion effect, Amplitude is at its maximum value. Amplitude then tapers to 0 as the distortion emanates from the center origin of the effect. The results of applying the Local distortion option while the frequency is varied are shown here.



Tip To clear a Distortion effect, click Clear Distortion Effect in the Property Bar or choose Effects | Clear Distortion. If you've applied successive distortions, each

distortion is cleared individually in order, from the last distortion applied to the first, so you can step out of the effect incrementally.

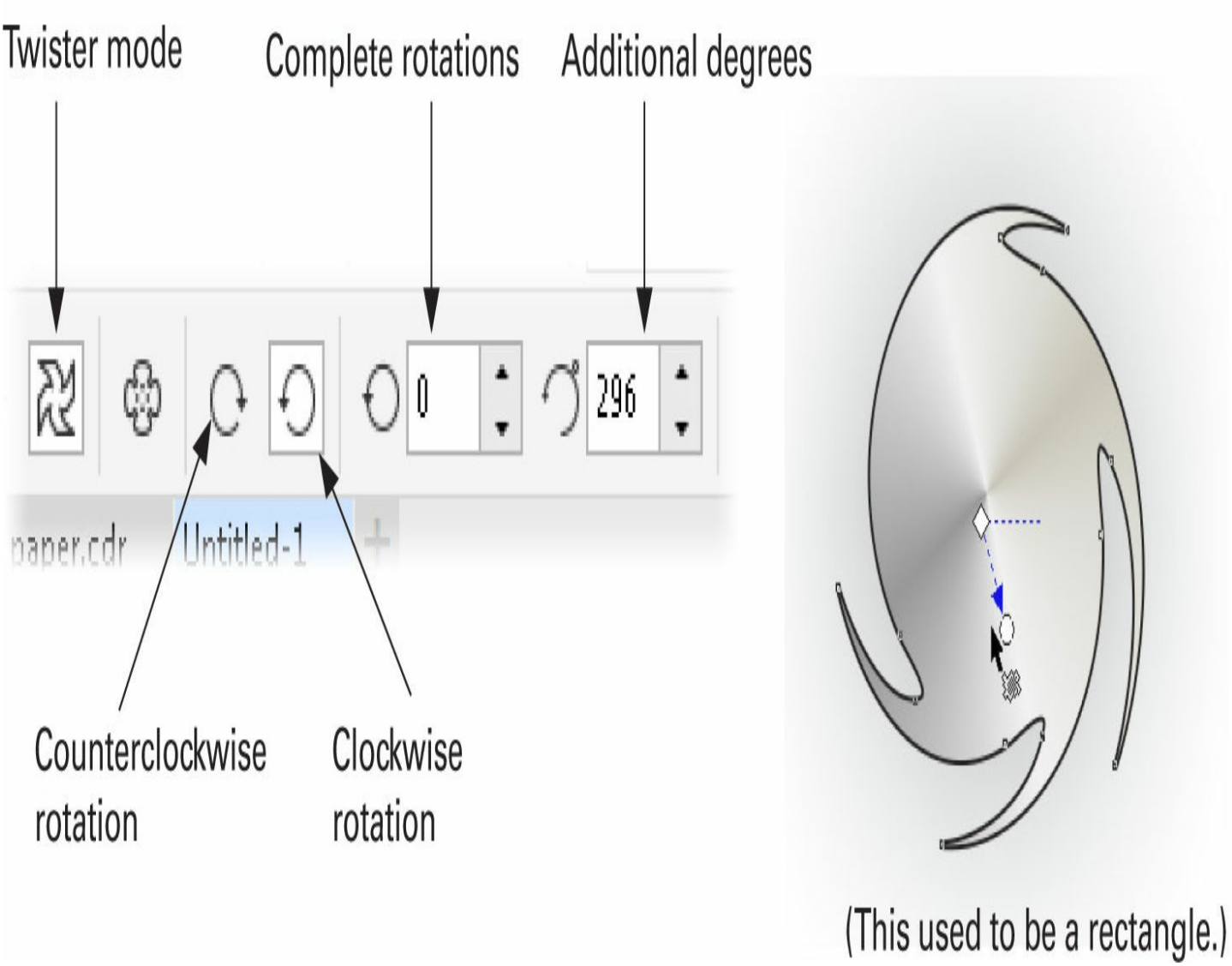
To bring all this Zipper talk down to a practical level, the following illustration shows two creative, commercial uses. On the left, the Zipper distortion is used as a coupon border, similar but more intricate than a burst you could use the Polygon tool to produce. The only finessing needed was to apply a contour to make the burst more colorful and pronounced. On the right, the diagram of a sewing pattern is gussied up a little by making the cut marks look as though real pinking shears were used.



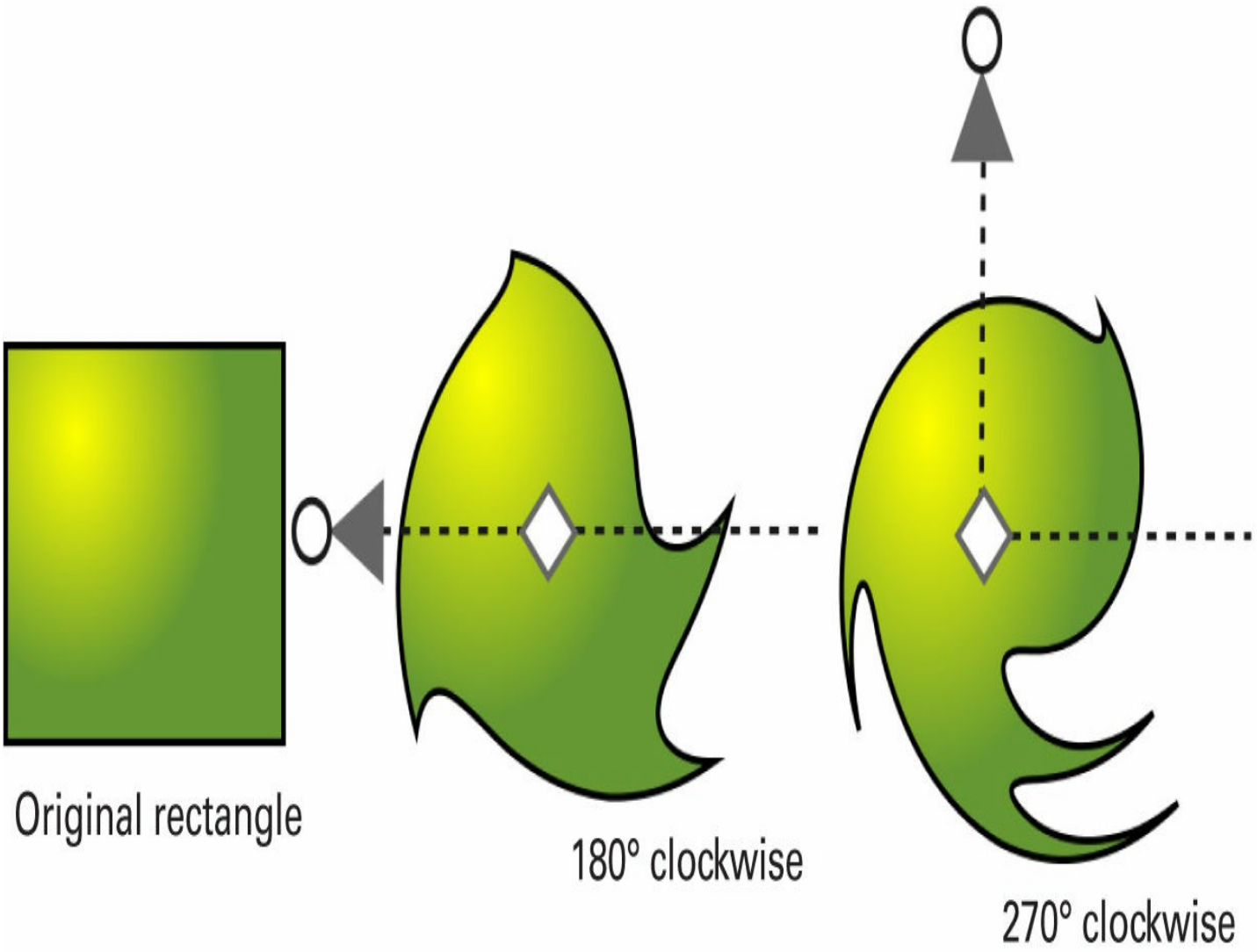
Twister Distortion

Twister distorts the outline paths and nodes of objects by rotating the outer areas around the center (which is largely undistorted) either clockwise or counterclockwise to achieve an effect much like a child's pinwheel toy. Twister options on the Property Bar include

rotation direction, rotation amount, and degree of additional rotation.



Controlling a Twister distortion is simple; rotation can be clockwise or counterclockwise, but increasing the rotation really dramatizes the effect of this mode. Whole rotations can be set to a maximum of 9; additional rotations can be added up to 359°—nearly another full rotation. Figure 18-4 shows some of the widely differing effects that can result—it all depends on the number of rotations and the object used as the target for the effect.


Original rectangle
180° clockwise
270° clockwise

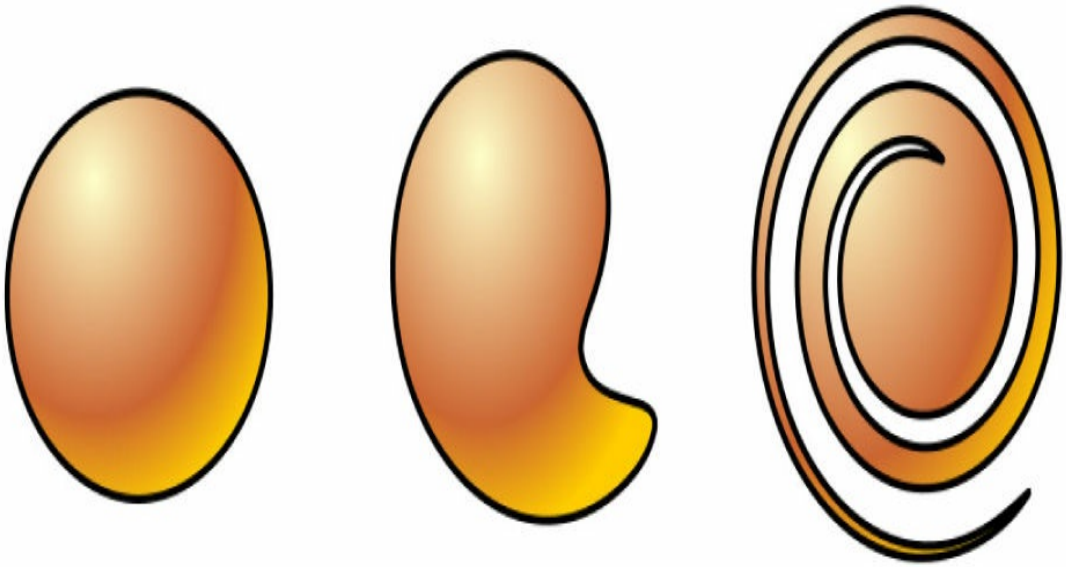

Original ellipse
35° clockwise
Two complete clockwise rotations + 240°

FIGURE 18-4 **Using simple objects and the Twister mode of the Distortion effect to create wild, organic shapes.**

Note Objects applied with a Distortion effect can't be edited using the Shape tool unless the effect is cleared. However, you can *convert* a distorted shape to curves (CTRL-Q) and then edit away to get the shape you need.

Getting Hands On with the Distortion Tool Markers

The best way to shape a distortion is interactively, by dragging directly on the Distort tool markers with your cursor. Depending on which distortion mode you're using, these interactive markers serve different purposes.

There are different interactive markers, depending on which mode (Push and Pull, Zipper, or Twister) you've chosen, but basically you have a Start direction handle shaped like a diamond, which sets the center of the distort effect. The Start direction handle is connected to the End direction handle, which is used to define the direction of the effect and also the *amplitude* (with the Push and Pull and Zipper modes). Generally, interactive markers involve a center marker and at least one other, each joined by a directional guide. When Zipper distortion is being applied, a small extra slider appears between these two markers and controls the amount of *frequency* applied. In the case of Twister distortions, the outer marker serves as a handle for determining the degree angle and amount of rotation you apply to an object.

Note To realign the center marker (the Start control node) with the center of the distortion, click the Center Distortion button in the Property Bar while the Distort tool and the distorted objects are selected. It's the button with the + symbol, to the right of the Twister button.

Changing Push and Pull Interactively

Push and Pull distortions are controlled using two markers: a diamond shape indicates the center of the distortion, and a square marker controls amplitude. The center marker can be moved around the object, but the amplitude marker movement is constrained to left or right movement. Dragging the amplitude marker left of center changes the negative amplitude values, causing the Push effect. Dragging it right of the center marker changes the positive

values, causing the Pull effect. Figure 18-5 shows the effects of different marker positions:

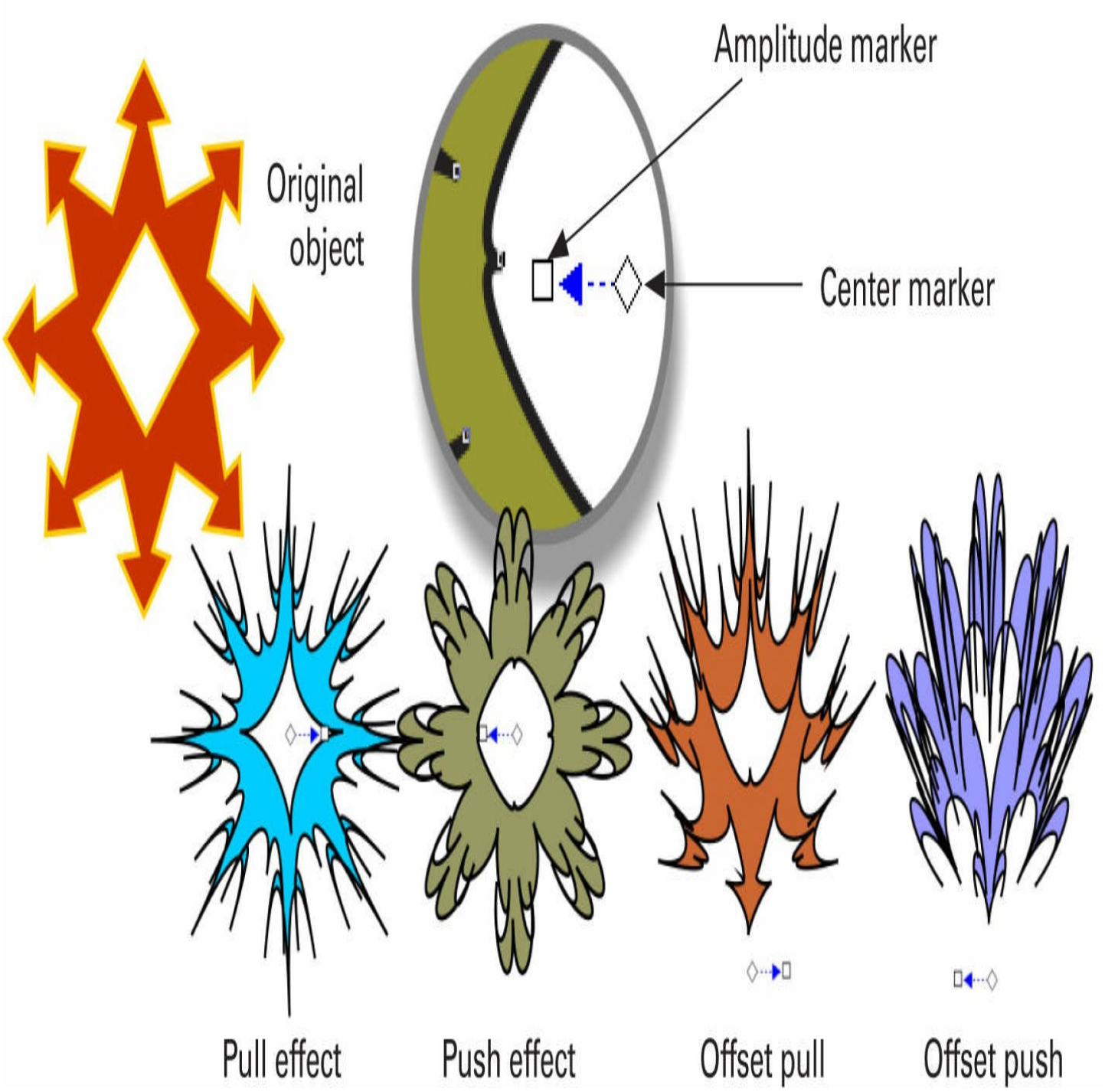
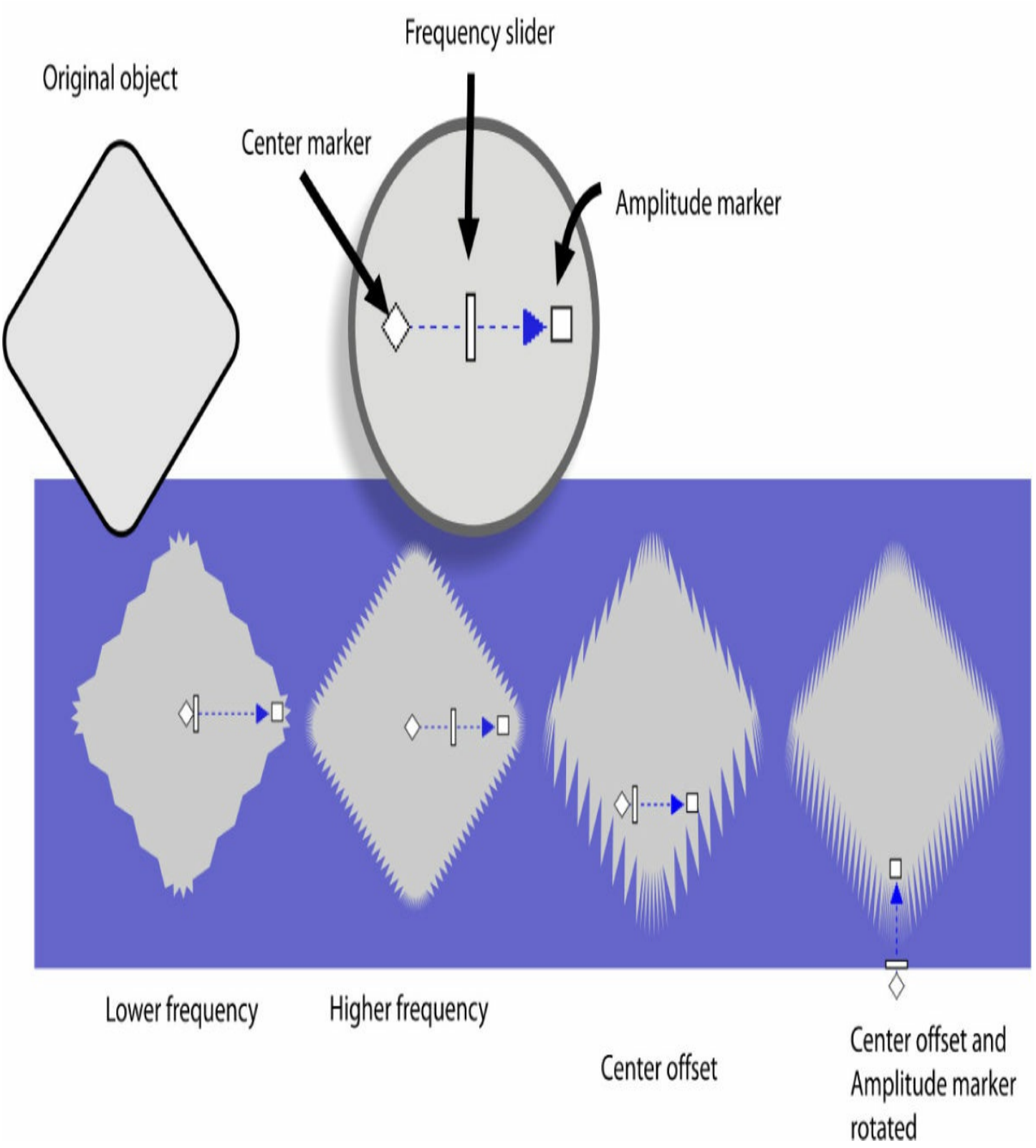


FIGURE 18-5 **Push and Pull distortions are controlled by a diamond shape and a square marker onscreen.**

Working with the Zipper Control Handles

Using Zipper distortion, the movable diamond marker represents the center origin, and the square marker to the right controls the amplitude value. Use the small rectangular slider on the dashed blue centerline to set frequency by moving it left or right. Dragging it right

increases the frequency, adding more zigzag shapes to your object's path, whereas dragging it left does the opposite. You also have the opportunity with Zipper, unlike the fixed positions of the markers in Push and Pull mode, to move the amplitude handle to slant the zigs and zags in a direction:



Tip Exactly as with Envelopes, the Distortion effects can be copied using the Toolbox Eyedropper tool. Check Distortions in the Effects drop-down list on the Property Bar. You then hold SHIFT to toggle to the Paintbucket tool, and then click over an object to "fill" the object with the Distortion effect you copied.

Changing Twister Interactively

Controlling Twister distortions by dragging with your cursor over the markers is the most productive (and fun) way to apply this distortion mode since one click-drag enables you to set two properties at once, both of which have a dramatic effect on the distortion. The markers during a Twister distortion are a diamond-shaped center marker and a circular-shaped rotation handle. Dragging the rotation handle around the center marker causes distortion based on the angle of the guide between the center and rotation markers and the number of times the rotation marker is dragged completely around the center marker. You'll also see a dashed blue line connecting the markers. This provides a quick visual reference of the beginning angle of the Twister effect and the current angle of distortion you define. Figure 18-6 shows examples of Twister distortions and positions of the markers.

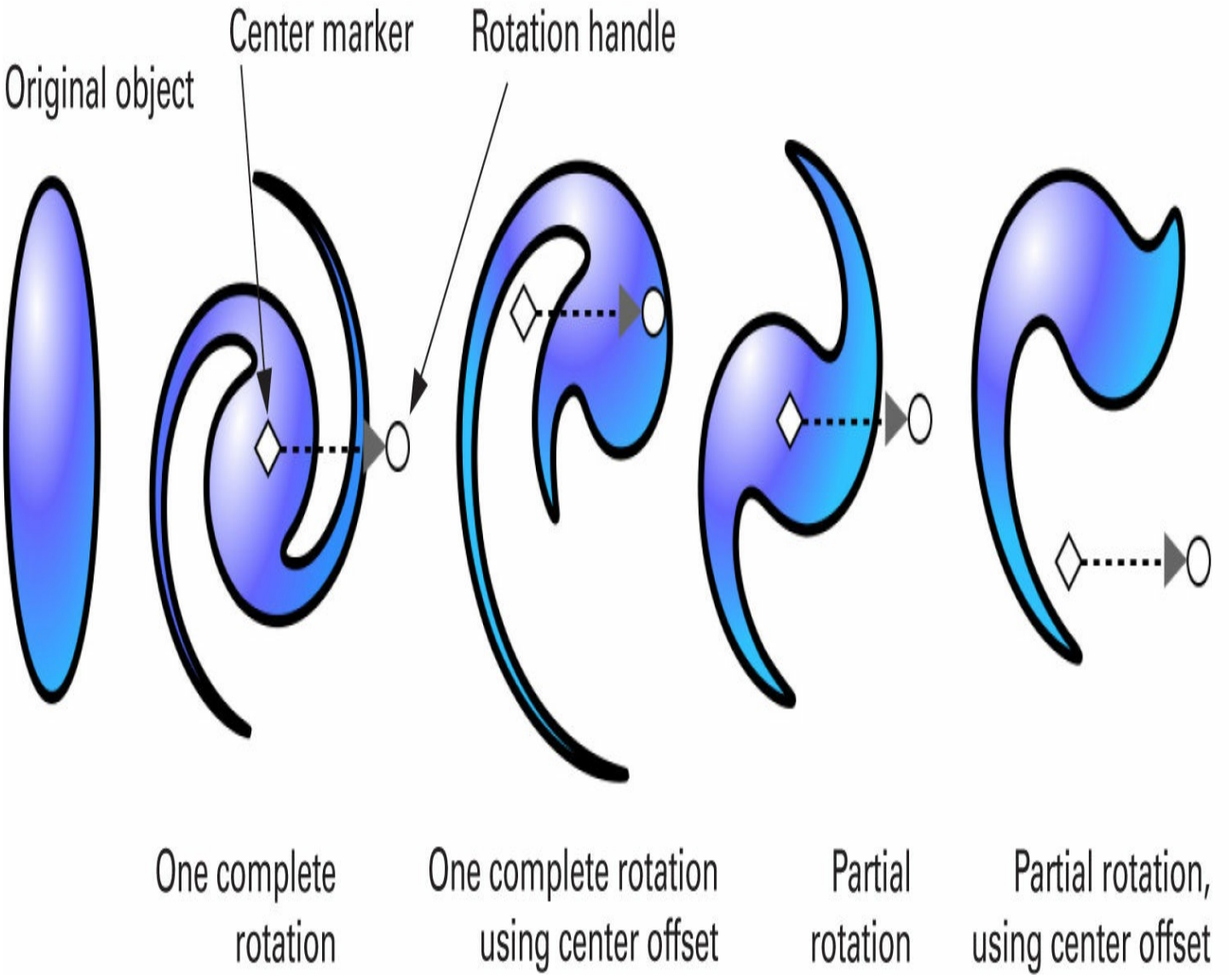


FIGURE 18-6 **It's best to use the control handles to create Twister distortions.**

Tip To copy a distortion to a new object, select an object, click the Copy Distortion Properties button in the Property Bar, and use the cursor to target an existing distortion.

Using Distortion Presets

The Property Bar Preset options for Distortion effects give you the power to apply, save, and delete saved distortions. Use the options on the Property Bar when the Distort tool is chosen, exactly as you use the Presets option with other effects in CorelDRAW.

Exploring Distortion Presets

When the Distort tool is the current tool selected, choosing a Preset from the list immediately applies a new Distortion effect to a selected object. If you've created a really awesome Distortion effect and you want to save the effect while the distorted shape in your document is selected, you can add it as a new Distortion Preset by clicking the Add button. The Delete button *permanently* removes a selected Distortion Preset from the list; therefore, think twice about ever clicking this button.

Between the Shape Edit and Distortion effects covered in this chapter, you should be well on your way to massaging an object or object group from something close to what you like to *exactly* what you like and need. Remember, these are dynamic effects and, as such, you don't permanently change that shape you've worked for hours on. And if you need to exchange data with a client or coworker who doesn't own CorelDRAW, you have two options:

- Take pity on them.
- Convert *a copy* of your effects work to curves (CTRL-Q) and then export the distorted or enveloped object to any number of file formats CorelDRAW supports. Effects are proprietary to CorelDRAW, but vector information can be used in other vector design programs and modeling programs or exported as typefaces—you name it.

This chapter has taken you through several processes by which you can create minor and big-time alterations to just about anything you draw; additionally, many of the operations apply to bitmaps you bring into the workspace. Use the command that best suits the task you have in mind, and use your judgment as to which operation will get you to your goal fastest. Personal computers are productivity enhancers: there's no need to labor over something when CorelDRAW and your PC can do it for you in less time.

The next stop on our tour of this vast continent called the Corel Graphics Suite is a little more fun with distortions, more fun still creating beveled objects, and a whole lot of fun getting deep into Corel's Lens Effects. In addition to Transparency, you can apply a Lens Effect property to make objects under the lens look like blueprints or a heat map, you can make parts of scenes look bloated or pickled, or you can suck the color out of an entire composition to create Grayscale Town!

No kidding! There are not a lot of things on Earth that are as fast and fun as what we cover in Chapter 19. C'mon, c'mon, turn the page! The ink's dry, so take your shoes off before coming in and relax!

19 Transparencies and Shadows

In our endeavors to make drawings more complete—to give the audience as detailed an illustration as possible—we rely on not just the silhouette of an object and its fill and texture, but also how an object *interacts* with its surroundings. There's more than meets the eye when it comes to replicating a scene or even a simple object. Wherever you have a light source, a solid object on a solid surface casts a shadow in the opposing direction. Even partially transparent objects leave their mark on a surface when illuminated from a direction. Similarly, what would our world be like if everything was 100 percent opaque? Sunglasses would be an impossibility, a room with a view would be false advertising, and even ice cubes would look suspicious! This chapter takes you through the CorelDRAW tools that assist you in creating transparent shapes and shadows cast by objects.

The Importance of Objects Interacting with the Scene

Here are a couple of illustrations to sell you on the importance of real-world phenomena. In the first illustration (open the file glass cube.cdr if you'd like to see how it was created), you can see a cube that's being illuminated from the right. There are no surprises, nothing of special interest, nothing being said artistically about a cube resting on a surface. In fact, the most interesting thing about this illustration is the cube's shadow—its softness contrasts with the hard lines of the cube, but you can do a *lot* better than this.