In this comprehensive article, the author discusses the value factors of colored gems in five parts. This article looks at the first two parts. Future issues of the Gem Market News will continue the discussion, looking at other factors.

Part 1: Value Factors of Colored Gemstones

For our purposes, the word “cut” means more than just the shape of a gem; it also encompasses the elements of “cut quality.” Cut quality refers to how well the gem was manufactured, or how well various facets were placed. Combined with the proportions, symmetry, and polish, a well-cut gem should have a beauty that not only comes from its color and clarity, but from how the facets interact with light. This series should illustrate how to assess the elements of cutting, and how to better understand the impact of cut quality on the value of various gems. Part of that will include understanding the choices a cutter makes and why. While our focus is on forms of faceted gems, we will briefly touch on non-faceted gems.

The quality of the rough material limits the gemstone’s final appearance. Therefore cutters prefer rough that is transparent and without many inclusions. Some gems are rarely eye-clean, so some inclusions become acceptable in those materials. Since color is the highest priority for colored gems, how a cutter manages the light as it enters and exits a gem becomes an exercise in artistry. Ruby rough with a deeply saturated red color and free from even minor inclusions under 10X will produce gems of noteworthy face-up color and appearance, even if the fashioning is poor. But if the faceting washes out the color or muddies its color by mixing dichroic colors, the cutter has failed miserably.

Josh Hall (Vice President, Pala International, Inc.) helps us put cut in perspective to a gem’s value (from Hall’s personal comments—see Fig. 1-1). He states that color is about 60% of the gem’s value, followed by the location it comes from which can influence 15% of the value (this can be much more for certain origins, such as Kashmir sapphire). After that, cut and size each represent around 10% of the value followed by the shape (outline) of the gem. I’m going to add clarity and color zoning to the discussion below. Each of these can be quite variable.

Before we go through each of the value factors in Figure 1-1, it is important to note that the relative value percentages represent Josh’s experience, but there are always exceptions. For example, in some local retail markets, size and cut can embody more than 10% of the gem’s value. Certain size ranges and cut qualities can be perceived as more saleable, so a premium can be added. All of these factors are discussed on a basic level. In reality, many are more complicated for each particular gem material.

**Color is King!**

In color science, there are three dimensions to color: hue (red, green, blue, etc.), saturation (intensity or richness of a color), and tone (lightness or darkness). There is a fourth color factor for gemstones: uniformity of color.

Our eyes see color as seven colors of the rainbow: red, orange, yellow, green, blue, indigo, and violet. Each of these colors is made of rays of light, each traveling at different speeds with different wavelengths. When all of the above colors combine, we see it as white light. When
white light enters a colored gem, part of the light can be absorbed. For instance, if a gemstone absorbs all of the colors except blue, only the blue will be visible, and we see the gemstone as blue.

The optimal color range (combination of hue, saturation, and tone) for each gem is different, and for many gems, availability in the optimal color can be scarcer (see Fig. 1-2). Pale colors usually have a relatively low value. However, pale blue-green (or mint) tourmaline from Afghanistan/Pakistan commands high prices, much higher than their more saturated counterparts from the same source.

Wayne Emery (*The Gem Cutter*) points out that some retailers have learned that there are customers who prefer less saturated stones because they appear to be brighter and have more sparkle. Thus, less saturated gems might sell more quickly than the more saturated (and expensive) ones. From the jeweler’s point of view, inventory turnover is very important and can result in much more profit over time. For this reason, some retailers prefer to use gems of lesser saturation in their designs to cater to this customer base.

Gems that are so dark that it is difficult to see through them are more difficult to sell and thus their cost usually drops significantly. The optimal color can cause values to significantly spike. In most cases (except bi-colored gems), the color uniformity or evenness is also part of this value equation. Gems that face-up with multiple hues are usually less valuable than gems that show a single pure hue. For example, evenly blue sapphires have more value than those with secondary green hues. For a colored stone (non-diamond), color is the most important factor in determining quality.

**Country of Origin**

For many colored gems, the *country of origin*, or the mining location, greatly affects the value (see Fig. 1-3). For example, this is truer and more extreme for an untreated sapphire of intense blue color from Kashmir which is worth far more than a similar sapphire mined elsewhere. A few of the major grading labs have the equipment and expertise to determine geographic origin. An origin report from one of these labs is required in validating the gem’s value when highly regarded locations can significantly increase the stone’s price (more than the 15% in a couple of cases).

Be cautious and read the report from a lab thoroughly. A standard report usually identifies the gem material, but not the geographic origin. Language used in a standard GIA Identification Report for a copper-bearing tourmaline will state, “This copper and manganese-bearing tourmaline may be called ‘paraíba’ tourmaline in the trade. The trade term ‘paraiba’ comes from the Brazilian locality where this gem was first mined, however, today it may come from several localities.” The trade calls these Paraíba tourmalines even though the location is not from Brazil. Only if the gem was sent in for a country of origin report, will it indicate the country, such as Brazil. In that case the price will be impacted by the Brazil origin.

Ruby, sapphire, red spinel, emerald, and Paraiba tourmaline all qualify for a GIA Colored Stone Identification & Origin Report. However, that does not mean GIA will be able to determine a country of origin in every instance. GIA determines geographic origin by collecting chemistry and spectroscopic data, and identifying types of inclusions on the sample of unknown origin. That data set is compared to sets of data from reference gems of known origins, looking...
for compelling evidence that indicates that the unknown is from a certain location. If the data overlaps with gems from two locations or more, and GIA cannot reach a definitive relationship to one location, the report has the result of “inconclusive.”

For collectors of crystals, “Herkimer” Diamond is a generic name for a double-terminated quartz crystal discovered in and around Herkimer County and the Mohawk River Valley in New York. In the high-end gem market, trade names have been used widely in the jewelry industry to denote particular gemstone colors or face-up appearances from specific geographic locations. The names were just as unlikely and profuse: “Paraiba” tourmaline, “Biwa” pearl, “Sandawana” emerald, “Australian” sapphire, “Burma” and “Mogok” ruby. Significant locations come and go. There is still strong consternation amongst many in the trade when a location is used as a name and the gem material isn’t really from that location. That doesn’t stop some dealers from calling a gem a “Kashmir” sapphire when its color mimics material from that location, and charging a false premium. This is why a country of origin report from a major lab becomes important, indicating that the gemstone has been tested and has the features associated with that specific country.

Finally, it should be mentioned that there is a great deal of poor material from highly prized locations, and in those cases knowing the country of origin shouldn’t provide added value.

**Size**

The size, which includes the weight and face-up diameter, of each type of gem material is also directly related to value (see Fig. 1-4). As the size increases to that of high demand, the price per carat goes up. Some gems are rarely seen above a couple of carats (e.g., benitoite), while others can weigh thousands of carats (e.g., quartz and topaz). Once gems get beyond a size that is common for jewelry, the number of interested buyers decreases significantly, and the relative value per carat diminishes. However, note that exceptionally large gems from those locations with exceptional color (gems that aren’t too dark) are so exceptional that they can be very expensive since they are rarely available from those locations except as near-black gems.

Subject to various issues with the rough material, the yield—the final carat weight of the gem compared to the initial weight of the rough—can be as high as 50% (very rarely) or as low as a few percent; cutters evaluate the various pros and cons when planning to cut the gem. Sometimes the best saturated colors only appear in larger sizes (e.g. kunzite or aquamarine), so that small ones of saturated color are rare and surprisingly expensive.

Conversely, if a deeply saturated rough is cut into a larger gem, it can be too dark and not as valuable. A uniformly colored piece of rough yields gems of different color intensity as the sizes and proportions vary. For example, a gem cut from light colored rough is considered attractive if it reaches a certain size to produce enough color saturation. In this case, a cutter might cut one large, deep gem rather than several lightly colored, well-cut gems. In the case of dark rough, some cutters use the “white paper test” to determine the best yield from the piece of rough. A piece of rough is placed on white paper, and viewed under incandescent and then fluorescent light, each time staying away from any bright sources of light. The color seen through the rough is from light that is reflected from the white paper underneath. By using both light sources you see the colors the gem will have under both types of lighting. If the rough is too dark to see much color, it should be cut into smaller gems to optimize the color. Obviously one could use a very bright light source to see through rough that would be black in many other situations. Wayne Emery suggests...
using a standard 100 watt incandescent bulb, one foot above a white paper in a dimly lit room.

**Clarity**
Gems are cut to sparkle and show off their color in interesting ways. If there are flaws that interrupt that sparkle, the gem is less interesting. Hence there is a value curve related to clarity that is also true for each type of gem (see Fig. 1-5). Some gem materials are almost always found with inclusions, while others are commonly eye-clean (inclusions cannot be seen without magnification). There are some inclusions that actually help the value of specific gems; microscopic light-scattering inclusions enhance the color uniformity in Kashmir sapphire by deflecting light into areas it would not normally go. The resulting velvety appearance of Kashmir sapphires adds value. Sunstone is also aided by light amounts of schiller (extremely tiny copper inclusions that create a cloud-like appearance), which in the right locations can add value.

**Uniformity of Color**
Any uneven distribution of color within a gemstone is called color zoning. Face-up color zoning, like clarity, has a value curve (see Fig. 1-6). An increase in face-up color zoning is usually regarded negatively, since uniformity of color is a mark of most fine gems. To better observe color zoning, turn the gem upside down on a white piece of paper and look for uneven coloration. You probably won’t see this in some gems, such as peridot or topaz. Now turn it face-up. Can you see the same color zones or splashes of darker or lighter color that you saw when the gem was upside down? Placing the stone in a clear jar with water (or vegetable oil or baby oil—do not use oil with amber), set on a white background can help you see color zoning in a gem.

**Shape**
Demands for shape (outline—see Fig. 1-7) and certain cutting styles have evolved and changed over the years. Certain shapes, often coupled with certain cutting styles, are more popular now because they work better with current jewelry designs. Other shapes are hard to sell as few people desire them, or they only work in a few designs. For instance, pear shapes are rarely sold for anything other than pendants and earrings, limiting their market. The creativity of the designer can help sell certain shapes by creating a unique appeal for a shape that is commonly avoided.

Some gem materials, such as tourmaline, are rarely cut as round shapes. Tsavorite garnet is not often fashioned as an emerald cut. Yet these shapes in these materials sell for more when available. Other materials are almost exclusively seen as round (Montana sapphire) or emerald cut (emeralds). The curve that reflects the current popularity of certain shapes and cutting styles, and their position on the curve, will change over time as demand shifts with fashion trends. Richard Hughes (of Lotus Gemology) pointed out that fine jewelry is often purchased by older people (young people have less money), and they often have conservative taste; thus the classics will sell better.

**Quality of Cutting**
Let’s stop for a minute and state the obvious: Jewelry and gems are personal, and are a reflection of the person who wears them. Therefore, why would we want to have choices that are not great looking?

Why do jewelers sell poorly cut “gems,” those that only sparkle around the outside with a dull area in the middle? When center (or main) pavilion facets are cut too shallow for that gem material, light passes through so that we see what is behind the gem. This is called windowing. (See Fig. 1-8: The wireframe depicts the facet arrangement of that peridot to illustrate certain aspects of gem cutting.) If we can see the girdle reflect-
ing under the table, it is called a fisheye. As dirt accumu-
lates around the edge of the mounting, that girdle reflec-
tion will be the color of the built-up dirt (often grey or
brown). These cutting styles are rarely attractive.

Gemstone artist John Dyer (http://johndyergems.com/
facts1.html) puts it this way: “Poor cutting belongs to a
bygone era when customers were not educated or picky
enough to care about the quality of their gem. A simple
‘colored stone’ becomes a real GEM with good cutting.”
Too many jewelers think poorly-cut gemstones are
“good enough.”

Josh Hall’s last element of value (see Fig. 1-9) was
Quality of Cutting. An exceptionally well-cut gem can
add more than Josh’s estimated 15% to a gem’s value.
In today’s market, a number of gem cutters are known
as “artists.” Gems from named artists can have signif-
icant additional value due to the artist’s popularity.
Even local cutters who are not recognized on a nation-
al level can get up to 40% added value for their work
with some jewelers.

If the gem were uncut, its value would be significant-
ly less. The impact of cutting on a gem’s value is propor-
tionate to its rarity. An extremely rare piece of rough
sapphire that sells for tens of thousands of dollars does
not necessarily double in price when cut. It has added
value, due to the cutting, but the cutting adds only a
small percentage to its value compared to the value
added to a piece of ametrine rough that sold for a few
hundred dollars that is cut by a named artist.

Part 2: Definitions
We now need to define aspects of cutting styles to
establish some common language, with a focus on
basic faceting styles, and a short discussion on cabo-
chons and beads.

Wireframes or depictions of facet arrangements (such
as Figs. 2-1 and 2-16) are from scans of real gems so as
to illustrate aspects of gem cutting. Face-up patterns
(such as Fig. 2-14) were made using the program
DiamCalc; adjustments were made to the refractive
index to represent the gem material being demonstrated.
DiamCalc cannot show double refraction.

Parts of the Faceted Gem
Generally speaking, most faceted gems have common
features, like a crown, girdle, and pavilion (see Fig. 2-
1). However, many gems cut in certain parts of the
world have such irregular facets, (see the pavilion of
Fig. 2-1) that the facets themselves defy normal nam-
ing conventions.

Usually gems are fashioned so that the observer is
looking through the table, the flat top facet on the crown
(top portion) of the gem, to see how light has been col-
lected and returned back to them to view. The girdle is
the outer edge of the gem, where metal grips the stone to
hold it in place in jewelry or art. The pavilion is the bot-

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If the pavilion facets come to a point at the bottom, that point is called a *culet*. Sometimes there is a small facet at the culet that is parallel to the table. This is called a culet facet.

The *total depth* of the gem is the total thickness of the gem from the table to the culet. A gemstone’s *crown height* (listed as a percentage of the diameter) can vary from deep to shallow, depending on the cutting style. *Pavilion depth* (expressed as a percentage of the diameter) can also vary. If a pavilion depth is too shallow, you will see through the gem, called windowing, and if it is too deep, the gem will appear dark overall.

A lot of what has been referred to as “native cut” can be exemplified by Figures 2-1 and 2-2. The facets are often very irregular on the pavilion. The crown can be somewhat more orderly, but can be as irregular as the pavilion. The culet can be considerably off center in native-cut gems (see Fig. 2-2). These gems were cut intentionally with the culet skewed to one side. Re-cutting these to improve cut quality will usually sacrifice the color, substantially decreasing its value.

**Brilliant Styles and Facet Names**

There are two important segments of the trade that sell colored gemstones—those whose focus is diamond and those whose focus is colored gemstones—and sometimes these two groups have different names for certain parts of the gem. Listed on Figure 2-3 are the most common names used for those facets.

The *table* is often the largest central facet on the crown. Crown mains (bezels in the diamond trade) are usually kite shaped, and refer to a position between the stars (triangular facets bordering the table) and the break or upper girdle facets (bordering the girdle). Crown mains usually touch the edge of the table and the edge of the girdle. Colored stone cutters refer to pavilion facets that touch the culet area as *culet facets*, even though the facets are not parallel to the table (this type of labeling is common in diagrams generated by software used by colored gem faceters called GemCad). In this diagram (see Fig. 2-3), the kite-shaped culet facets may also be referred to as *kite facets*. When there is more than one row of either triangular or kite-shaped facets between the lower girdle facets and the culet (or culet facets), the facets of the intermediate rows are called *mains* or *pavilion mains*. Often adding confusion, there can be several rows of facets in this region and all of them can be referred to as *mains*. The names lower girdle or lower half facet are used in the diamond trade to describe facets at the girdle on the pavement side, but colored stone cutters usually refer to these as *break facets*.

As shapes become less symmetrical, facet arrangements become less standardized. In Figure 2-4 the faceting style is still brilliant, but there can be some confusion on what to call some of the pavilion facets, since they don’t assume the common shapes for brilliant styles.
Step Cut Styles
Many facet arrangements consist primarily of step cuts, the most classic being the emerald cut (see Fig. 2-5). Any shape can be cut with step cuts. Figure 2-6 illustrates an oval step cut. Note that the facets don’t meet carefully, and many are not parallel. This is usually the case in most commercially-cut gems. The higher the precision of cutting, the better those facets will meet. Note that there is a line that forms along the bottom of this facet arrangement, not a single point for a culet. While the bottom is still referred to as a culet, this line is often called a keel or keel line. Step cuts usually have keels.

Step-cut facets are four-sided, with the upper and lower edges being nearly parallel. For crown facets, the upper edge is parallel (or nearly so) to the table edge and the bottom edge is parallel (or nearly so) to the girdle. In most commercial cutting there are triangular facets that are left over from where the steps don’t meet well. Sometimes these can be five-sided (like the corners on the crown of the emerald cut; see Fig. 2-5).

Mixed Cut Styles
Mixed cut means that the cutter used both brilliant and step-cut styles in the facet arrangement. Ovals and cushions are often cut with step-cut pavilions, but brilliant style crowns (see Fig. 2-7). This breaks up the light into yet a different pattern. Remember that uniformity of color is important for the value of a colored gem. Mixing the styles of cutting will also assist in evening out the color and minimizes the effect of a small window at the culet.

For more uncommon cuts such as the Barion cut (see Fig. 2-8), facet names can vary with different cutters.

Rose Cuts
The rose cut features a flat bottom with a dome-shaped crown reaching an apex (see Fig. 2-9) formed by 3 facets or more. Rose cuts, so named because they resemble the shape of a rose bud, were originally cut in diamond in
the 1500s. By the 1800s this cutting style had moved over to a few colored gems such as marcasite and garnet. Recently, it has found fashion in a number of other colored gems.

Non-faceted Styles
The non-faceted styles of gem cutting predate faceted styles, with the earliest form being either the bead or cabochon (or cab). A gemstone bead is fashioned in a variety of shapes and sizes, and is pierced for threading or stringing. The material can be transparent to opaque.

The simple cab has a rounded top and flat bottom (see Fig. 2-10), and the double cab has both a rounded top and bottom (see Fig. 2-11). The usual traditional shape for cutting cabs has been an ellipse (oval). This is probably because the eye is less sensitive to small asymmetries in an ellipse, as opposed to a uniformly round shape, such as a circle. The elliptical shape, combined with the dome, is also attractive. More recently many shapes, including freeform, are used for cabs. The term ‘cabochon’ is often used to describe any gemstone shape that is not a bead, carved or faceted.

In the case of asteriated gems such as star rubies, and chatoyant gems such as cat’s-eye chrysoberyl or tourmaline, a high domed oval or round cab cut is necessary to show the star or eye, which would not be visible in a faceted cut. For those better quality star or cat’s-eye gems that are often translucent to near-transparent, the quality of how the back has been finished will be more important. The back should be unpolished (see the first two gems of Fig. 2-12). Josh Hall points out that if the back is polished for a highly transparent gem, the star or cat’s-eye effects will appear diminished if not almost gone (the third gem of Fig. 2-12). For finer translucent and transparent gems with an eye or star that is not quite sharp, sometimes a coarser finish on the back will sharpen the line. The backs of star and cat’s-eye gems can
sometimes be very deep, adding unnecessary weight.

Any outline can be cut in any of these cabochon variations (see Fig. 2-13). Early forms of cabs were sometimes carved (seals, scarabs, cameos, etc.), and today there are certain common variations of the cab: double, high, and hollow. Hollow gems can have one of two purposes: 1) They are used to deceive by putting colored glue behind a thin translucent wall of the gem to intensify a certain color; or 2) Exceptionally dark gems can have their apparent color lightened.

Cameos and intaglios are the most common form of carved cabs today. Cameos are made by cutting away material; the design remains above the level of the base. With intaglios, the reverse of the cameo, a design is cut into the gem below the highest part of the surface. The most common subject matters were historic or religious figures, and frequently used materials have different colored layers (like banded agate) which can be revealed in forming or embellishing the image (the face will be one color, while the background is another color). Shell and agate are two of the most commonly used materials, but others include amber, coral, jet, and lava. Carved gems can take any form, from freeform and geometric to carved flowers, animals, or mythical beasts and more recently modern carved gems can replicate a photo of a family member. In recent decades, the hand-carving of these types of gems has been modernized by ultrasonic machines. Gems with higher levels of intricacy cut by ultrasonic methods are not as valuable as those cut by hand.

While most commonly seen in cabochon form, composite gemstones are also found with faceted gems when two or more gem materials are bonded to form a single gem. Common forms include opal doublets (two parts) and triplets (three parts). Sometimes faceted gems are cemented together with the intention to deceive; a natural gem material is used on the crown and glass or some synthetic is used on the pavilion. A colored cement layer can even change the apparent color. Intarsia is a composite art form of inlaying that fits pieces of gems together to form a picture or mosaic.

**Shape and Sometimes Cutting Style**

As mentioned in the introduction, the shape or outline of the gem and sometimes the cutting style is a value factor. Certain shapes are in higher demand and make the gem more saleable. The outline of a gem can be a variety of shapes and with each there is an almost unlimited variety of facet arrangements. Figure 2-14 shows some of the most common shapes used in the trade, each with more than one facet arrangement. A few of these names can be confusing. Emerald can refer to the outline, or to a specific facet arrangement or cutting style with that outline. For instance, a radiant has a brilliant cutting style with an emerald outline. The square emerald (a debated moniker) is the same as an octagon. A triangle, trillion, and trilliant can have flat sides (sometimes with cut corners), or curved sides. Other outline shape names not shown include briolette, hexagonal, keystone, kite, lozenge, pentagon, rhomboid, s-curve, seven-sided, shield, and trapezoid.

**Quality of Cutting**

Note that naming these following quality styles is more
for convenience and is arbitrarily chosen by the author. There are exceptions as styles blend into each other, and styles are not always easy to classify.

“Native cut” often indicates a cruder style, referring more to an almost outdated method of cutting and thus an assumed lack of accuracy. There are very few native-cut gems in the market today.

Native-cut gems are usually cut with jamb-peg machines (see Fig. 2-15). The rotating lap (C) provides the grinding and polishing surface. The wooden "dop" stick (D) to which the rough gem is cemented, holds the gem in position as flat facets are placed. The angle of each facet is controlled by placing the dop stick in a particular hole (E), but the faceter controls how much is cut away by the amount of pressure and time the gem stays in contact with the lap. The radial placement of the facets around the gem is done by lifting the dop away from the machine, slightly rotating and reinserting the dop in the same hole (for a certain row of facets) as each different facet is placed. This is doubly difficult since facets are first placed with a coarser grit on the lap, and then the process is repeated by polishing each facet on a polishing lap. There are many gems produced this way (see Fig. 2-16). Note that the outlines are often asymmetrical and facets are not well placed. Typically the crowns are cut more carefully with facets meeting fairly well, while the pavilions have extra facets, uneven rows, poor meeting of facets, and off-center culets.

Gems by jamb-peg are, as mentioned above, assumed to be a cruder style of cutting, and assumptions are that this style of cutting is poorly executed and less accurate. That is not always the case. In fact, the facetting arrangements that evolved through this method enhance and spread out the color very consistently (remember that uniformity of color is very important), making gems cut in this style with somewhat better uniformity and symmetry very highly prized for some of the most expensive gem materials (ruby, sapphire, and alexandrite). There are cutting firms that excel at carefully placing facets in those old style arrangements by both the jamb-peg method and using modern faceting machines.

“Commercial cut” includes many native styles, but the cutting quality is better (see Fig. 2-17). In particular the outlines are even and symmetrical, and there is much better facet symmetry. For this article, commercial refers only to a general quality of cutting, not to a general quality of the gem material. In cutting centers that used to be known for native-cut gems, a “master” may still preform the gem using the old cutting style.
standards, but then modern methods finish the gem. Obviously there is a range of quality for both native cut and commercial cut goods, and the border between the two is often unclear.

Just as the border between commercial cut and native cut gems is somewhat ambiguous, the border between commercial and designer cuts is also ambiguous. The third design shown in Figure 2-17 could be viewed by many as a designer cut.

“Designer cuts” (also called “precision cuts”) are best described as gems where the designer creates a unique face-up pattern utilizing unusual facet arrangements while using traditional faceting methods (see Fig. 2-18). The goal of most designers is to create a crisp appearance with a unique face-up pattern, whether that is bright and sparkly or purposely windowed as part of the unique face-up pattern. There are many cutters within the US that cut for local jewelers as well as large-scale cutting firms (some are members of groups like the American Gem Trade Association) that have booths at trade shows.

Distinctions between designer and craftsman are better understood when compared to the auto industry. Designers design a new model of car, and skilled artisans or craftsmen make thousands of ‘clones’ of it in the factory. Here in the context of this article, “designer cut” distances itself from the many styles that have been traditionally produced to create new face-up appearances. That’s where the comparison breaks down, because once a new design has been produced that is visually interesting, it gets reproduced by many, with the design often being shared with other cutters. Those who repeat these designs are perhaps better called artisans, but the style can be referred to as designer cut, since it is a break with more traditional styles. This may be why some choose to use the less confusing term “precision cut.”

“Fantasy cuts and artistic cutting” includes both unusual outlines with standard faceting and standard outlines with concave faceting (see Fig. 2-19). Most of these designs have a unique arrangement of polished grooves on the pavilion which create a dynamic outline. Polished grooves on the pavilion (or crown) help to create new patterns of light not possible with conventional faceting. Some artists have found ways to use odd rough, such as Glen Lehrer who uses shallow rough for his Torus Cut. This discussion (taken up again in part 5) is limited to faceted styles mentioned above and avoids those borderline areas (carved designs as well as “optical dishes” sometimes placed seemingly randomly on the reverse of a gem).

The term fantasy was derived from the German word Phantasie, meaning fancy, and is an attempt to classify this style in conventional lapidary terms. One of the most significant artists for fantasy styles is Bernd Munsteiner, who introduced this style in the...
1970s. Munsteiner focuses on what he calls “total reflection,” seeming to, as one called it, “sculpt internal facets.” Cutters of this style aim to create objects of beauty from gem materials. Since American and foreign factories and cutters are mass producing designer knock-offs of some of the most well-known designers using lower quality gemstones and less detailed workmanship, it is easy to find less expensive examples that are not well cut.

Summary
In Part 1 we reviewed the seven major factors that affect the price of a colored gemstone: color, country of origin, size, clarity, uniformity of color, shape, and quality of cutting. Part 2 defined aspects of various gem cutting styles to establish some common language, with a focus on basic faceting styles. With the advent of automatic cutting machines, these quality ranges that I have arbitrarily divided into four groups will continue to change. At this time, factories are using styles that certainly mimic artistic and precision cutting, but careful examination of the quality of cutting shows that they don’t have the precision or quality expected. In the next installment, Parts 3 and 4 will dig deeper and explore many of the factors used in the trade to assess relative value, as well as explain some of the choices cutters make and why. In the third installment, Part 5 will discuss issues of craftsmanship. Parts 3 through 5, together provide a foundation for understanding cut quality and its value impact for a gem material.

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About the Author: Al Gilbertson is the Project Manager, Cut Research at the Gemological Institute of America Laboratory Carlsbad. He made significant contributions while functioning on the American Gem Society (AGS) Cut Task Force, when his patent was acquired by AGS and is the foundation of their ASET technology for cut grading. Hired by GIA in 2000, he became part of GIA’s team that created the current cut grading system for round brilliant diamonds. Al is also the author of American Cut—The First 100 Years.