Cutting of Diamonds

Should Any Historical Diamond be Re-cut

Cutting of Diamonds

- “The cutter does not get paid for what he leaves on the cutting room floor”.
- Each advance in technology improved brilliance at the expense of weight
- Early cutters followed the form of the crystal.

Cutting of Diamonds

- In historic times, diamonds came from India
- Indian culture believed diamonds came from the Gods, mystical and magical
- Diamonds were placed in temples (as eyes of statues) or as special offerings
- It was first believed that any alteration to the crystal destroyed its magic
- Faceting may have originated in Europe

Cutting of Diamonds

- Point Cut Mid 1300s
- Table Cut Mid 1400s
- Old Single Cut 17 facets
- Pendeloque 1476 Absolute Symmetry
  or Briolette
- In or around 1476 *Lodewyk (Louis) van Berquem*, a Flemish polisher of Bruges (Belgium), introduced absolute symmetry in the disposition of facets. He cut stones in the shape known as *pendeloque* or *briolette*; these were pear-shaped with triangular facets on both sides.

Cutting of Diamonds

The beginnings of the Brilliant Cuts

- Rose Cut Mid 1600s Rows of facets over a flat base
- Mazarin Cut Mid 1600s 34 facets
- Old Mine Cuts Mid 1600s
- Peruzzi Cut 1700 56 facets
- Old European Cut Late 1700s 58 facets

Cutting of Diamonds

Rose Cut

Famous rose cut diamonds:
Great Mogul, Orlov, Koh-i-Noor

Old Mine Cuts

- Early brilliants had square or rectangular cross-sections which were rounded giving the general appearance of a cushion
- Primitively cut, they lacked symmetry
- They had a small table and a large culet
- They were common by the early 18th century.

Cutting of Diamonds

Old mine cut

Cutting of Diamonds

- The Old European Cut is the forerunner of the modern standard round brilliant. Characteristically, it was hand cut with 58 facets, round, usually lacking symmetry, high crown, small table, large culet. It accented dispersion, especially in low light

Cutting the Cullinan

- The largest piece of gem-quality diamond rough ever found came from the Premier Mine in South Africa on January 26, 1905
- It was reported to Fred Wells, the surface manager, who dug it out of the mine wall
- Story

Cutting the Cullinan

Sir Thomas Cullinan McHardy Fred Wells

Cutting the Cullinan

- The Cullinan was sold to the Transvaal government who gave it to King Edward VII for his 66th birthday (1907)
- The king entrusted the rough to Abraham and Jacob Asscher, Amsterdam for cutting and polishing
- The first step was planning how to make best use of the rough.

Cutting the Cullinan

The Asschers planning how to cut the Cullinan

Planning

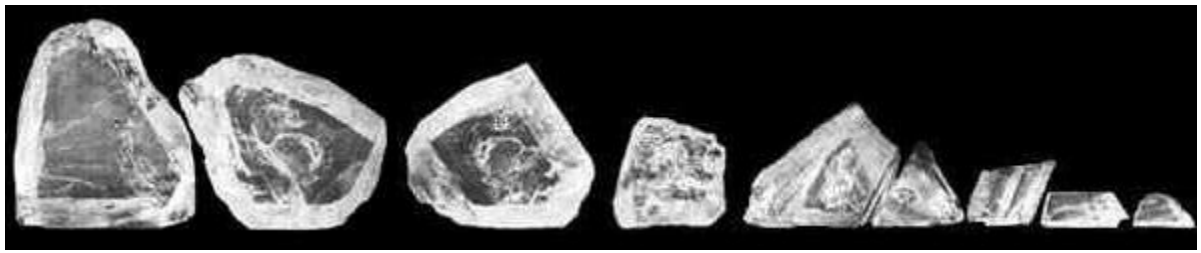
- Analysis showed cutting problems for the stone - including a black spot in the middle and signs of strain around this spot
- Months of consultation. Several test models
- The cutting process started, in great secrecy and security, with the cleaving of the stone on February 10, 1908. The story

Cutting the Cullinan

Jacob Asscher
marking the Cullinan
prior to cleavage

Cutting the Cullinan

Cleavage resulted in three large pieces which were further cleaved into 9 major stones. Each stone was cut and polished to the shape that maximized size and beauty



Cutting the Cullinan

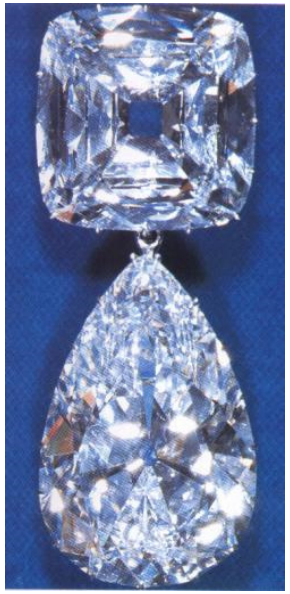
- Polishing started March 3, 1908 and was completed 8 months later

Glass replicas

The largest stone Cullinan I, weighs 530.20cts. Cullinan II weighs 317.40cts

Cullinan I

Cullinan II



Cullinan IV
Cullinan III

Cullinan VII
Cullinan VIII

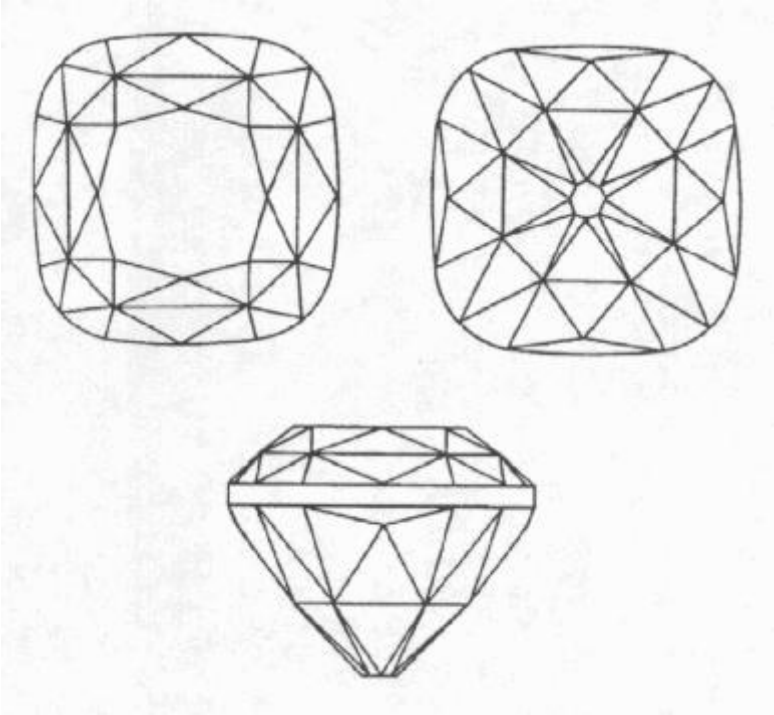
Cutting the Cullinan

Cullinan I is mounted in the Royal Scepter of Great Britain

Cutting of Diamonds

- Brilliant cut doesn’t refer to the appearance of brilliance in a diamond. It refers to the shape of the facets
- The facets of a brilliant cut are predominantly triangular or kite shaped
- The other common cut is a step cut where the facets are rectangular or square
- A mixed cut is part brilliant, part step

Cutting of Diamonds



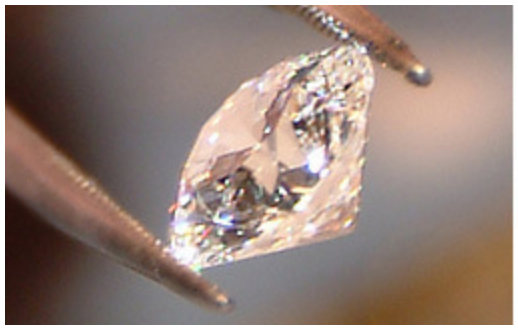
Tiffany Yellow 128.54cts
modified old cushion
brilliant cut 90 facets

Cutting of Diamonds

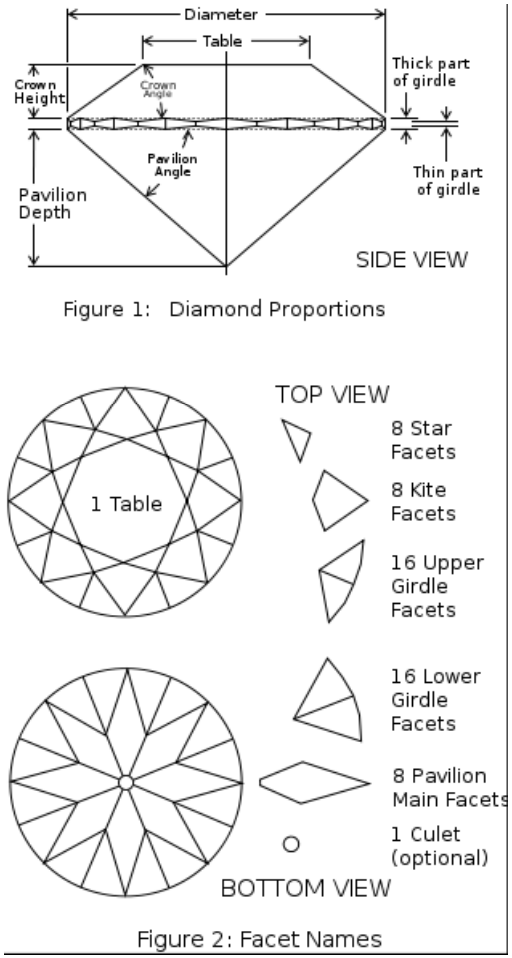
- Tiffany Yellow is an example of a cut that was “designed” for the stone
- Tiffany gemologist George Kuntz modified the customary cutting style of the day (1878/9):
- to sacrifice brilliance to give the appearance of a “smoldering fire”
- to maintain weight significantly over 100cts
- to improve appearance in artificial light

Cutting of Diamonds

- Standard Round Brilliant Cut
- 1919 Marcel Tolkowsky calculated the proportions for optimal brilliance in a round diamond



Cutting of Diamonds



Tolkowsky “American” Standard Round Brilliant

Cutting of Diamonds

Tolkowsky American Standard Round Brilliant

- Height of crown – 16.2% of girdle diameter
- Depth of pavilion – 43.1% of girdle diameter
- Diameter of table – 53.0% of girdle diameter
- Ratio crown height to pavilion depth – 1:2.6

  Other cutters have developed different ideas of a standard round brilliant optimal cut e.g. ”hearts and arrows”, “ideal”, etc.

Cutting of Diamonds

- in 2006, after many claims, counter claims and disputes, GIA revised its standards for grading the quality of “cut”
- With the experience of 38 million data points, GIA determined that no one set of values will ensure optimal cut brilliance
- Given the same set of values, some stones will still out-shine the others

Cutting of Diamonds

- GIA has proved that there is more to a well cut stone than just the proportions envisaged by Tolkowsky, and all the others who followed
- To the best of his ability, the cutter strives to liberate the full potential and special beauty from a particular rough crystal. This is still an art and a skill beyond price. It cannot yet be reliably matched by machine

Cutting of Diamonds

- GIA has established that to hold a cut grade of EXCELLENT, the individual categories such as proportions, symmetry, angles, and appearance of the stone, can lie within limits
- To be graded EXCELLENT, the cut gemstone must be within the EXCELLENT range in every category.

Cutting of Diamonds

- The final cut grade of a GIA certified diamond is the lowest grade given in ANY category – Excellent, Very Good, Good, Fair, Poor
- Cut is one of the 4 “C”s that influence the diamond’s value

Re-cutting of Diamonds

- Diamonds are candidates for re-cutting if they have been:
- badly cut in the first place (native cut)
- damaged by abrasion, chipping, an accidental blow, or overheating in a fire
- cut in a bygone era, when cutting was less advanced, such as old mine cut and old european cut

Diamond Handbook by Renee Newman, GG - pages 107, 127,130

Re-cutting of Diamonds

A diamond will be re-cut for three reasons:

- To enhance its beauty and thereby increase its value . Any increase in value per carat will be offset by a loss of carats
- To salvage value for commercial reasons
- Where sentimental value outweighs the cost

Re-Cutting Historical Diamonds

Historical diamonds:

- have a long recorded history
- have fanciful names - often named for a prominent owner (Great Mogul) or excited utterance (Koh-i-Noor = mountain of light)
- Have resided in State treasuries or the private collections of emperors, kings, potentates, or princes while cutting technologies improved

Re-Cutting Historical Diamonds

- Most historic diamonds come from the historic source of diamonds - India
- Indian princes amassed fortunes in gemstones which financed wars and became spoils of war if the prince was unsuccessful
- Important gems changed hands - some often
- “whoever owns the Koh-i-Noor rules the world”

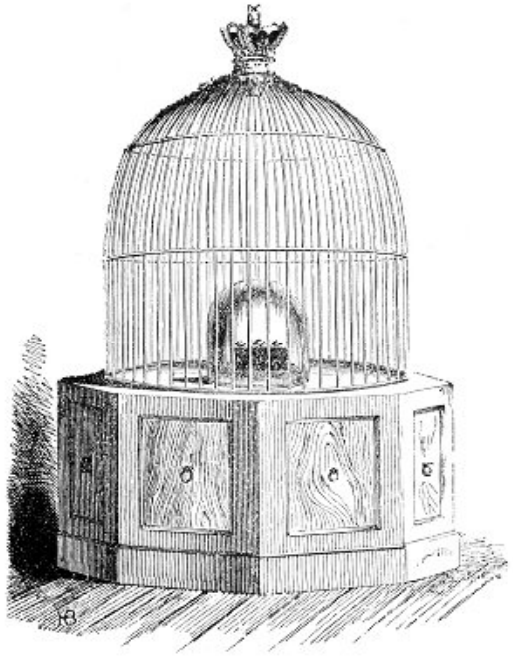
Re-Cutting Historical Diamonds

- Some diamonds were sold to Europeans
- The British pushed the French out of India defeating the princes supporting the French
- The East India Company consolidated British sovereignty over all of India in the mid nineteenth century
- The Koh-i-Noor (mountain of light) came into the possession of Queen Victoria (1850)

Re-Cutting Historical Diamonds

- The Koh-i-Noor was displayed at the 1851 World's Fair at the Crystal Palace In London
- People were shocked that the most famous large diamond in the world, rose cut at 189cts, appeared so plain and ill-cut by European standards
- In 1852, Prince Albert persuaded his wife Queen Victoria to have the Koh-i-Noor re-cut

Re-Cutting Historical Diamonds



The Koh-i-Noor (center stone) in its display case at the 1851 Exhibition

Re-Cutting Historical Diamonds

- The roundish diamond was entrusted to Garrard's who re-cut the diamond in 38 days to a stellar brilliant oval
- weight 108.92cts revised to 105.60cts (1992)
- Its brilliance was certainly a step up but the loss of carats shocked Prince Albert
- The Koh-i-Noor was mounted in the 1937 coronation crown for Elizabeth Bowes-Lyon

Re-Cutting Historical Diamonds

Is the Koh-i-Noor still the Koh-i-Noor?

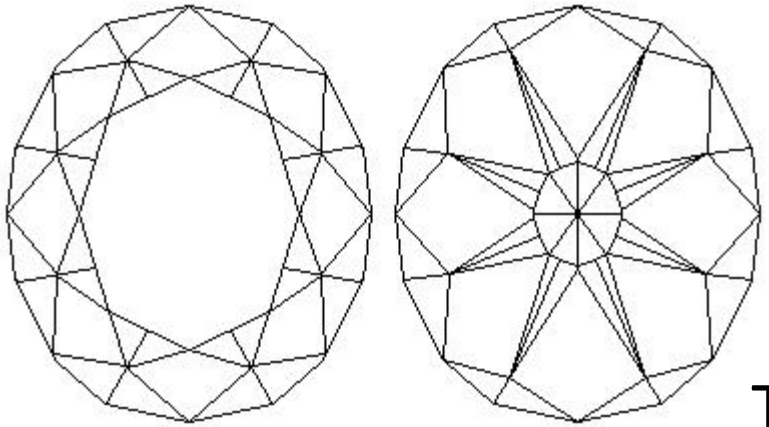
- It changed beyond recognition. It lost almost half its weight. It was a joke in “Punch“
- Its beauty can be improved yet again by re-cutting to modern standards but it would then be less than 100 carats
- There are historical diamonds less than 100cts but not many - most are colored diamonds

Re-Cutting Historical Diamonds

- One of these is the Wittelsbach Blue
- First recorded in 1664 as a gift from Philip IV of Spain to his daughter, the Infanta, on her betrothal to Leopold I of Austria
- In 1722 it came by marriage as a “family diamond” to the House of Bavaria (the Wittelsbachs) where it stayed until abdication in 1918

Re-Cutting Historical Diamonds

The facets are described as unusual, old mine cut, stellar brilliant cut. The large culet was hidden by a glued-on blue sapphire, which enhanced the color



The Wittelsbach Blue

Re-Cutting Historical Diamonds

- The Bavarian crown jewels were auctioned in 1931
- Whereabouts then became clouded
- Briefly seen at the Brussels' Fair in 1958
- An unknown gem was brought to a jeweler in 1962 for re-cutting. The jeweler recognized the 35.56 cts Wittelsbach Blue, and bought it instead

Re-Cutting Historical Diamonds

- Wittelsbach Blue went into a private collection in 1964
- It surfaced again at Christie's in 2008 and sold for $23.4 Million (a record at auction) to Laurence Graff

The old (1600s cut) Wittelsbach Blue

Re-Cutting Historical Diamonds

- January 7, 2010 it was announced that the Wittelsbach Blue had been re-cut to remove chips and bruising, enhance cut, clarity, and color.
- In 2010, it was put on view at the Smithsonian at 31.06cts, Fancy Deep Blue
- There is controversy, as critics claim the re-cutting has altered the diamond so as to make it unrecognizable, that its historical integrity has been compromised.

Re-Cutting Historical Diamonds

Wittelsbach Blue
before Re-cutting

Wittelsbach-Graff Blue
after Re-cutting

Re-Cutting Historical Diamonds

- Ms. Mascetti of Sotheby's said: "In a way, it is a shame to have altered what has been preserved for so many years. Do you still have the original stone found by Tavernier or cut in his time? Will that stone still be the Wittelsbach? In my opinion, it's not."

Re-Cutting Historical Diamonds

NOTE:

- The Tavernier Blue 115.16cts was re-cut to the French Blue approx 69cts, which was re-cut to the Hope Diamond, which was reshaped by Harry Winston to 45.52cts
- I have not seen printed the carats lost in reshaping the stone
- 17th, 18th, 19th, 20th centuries what in 21st ?
- same stone, different names, historic!