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Color & facial analysis...personalized eyewear

Abstract

This literature review will provide guidelines involving the application of color and facial analysis for the purpose of personalized eyewear dispensing. The concept of color analysis and its various classifications will be explained to provide an understanding of how different color groups affect an individual's appearance. The influence that frame selection has on facial feature proportions and overall facial contour will be presented in a manual format. The combination of these concepts may then be used to provide the patient with the most appropriate selection of eyewear.

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COLOR & FACIAL ANALYSIS . . . PERSONALIZED EYEWEAR

BY

CLAYTON P. TWITERO

GUY K. YAMADA

**A thesis submitted to the faculty of the
College of Optometry
Pacific University
Forest Grove, Oregon
for the degree of
Doctor of Optometry
May, 1989**

Advisor:

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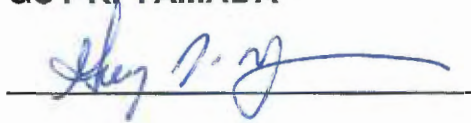
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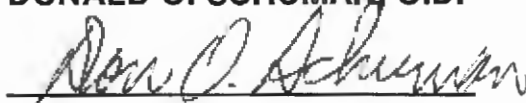
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Abstract

This literature review will provide guidelines involving the application of color and facial analysis for the purpose of personalized eyewear dispensing. The concept of color analysis and its various classifications will be explained to provide an understanding of how different color groups affect an individual's appearance. The influence that frame selection has on facial feature proportions and overall facial contour will be presented in a manual format. The combination of these concepts may then be used to provide the patient with the most appropriate selection of eyewear.

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Also, special thanks to Dr. Donald O. Schuman and his wife Marilyn, for their contributions toward the preparation of this paper.

INTRODUCTION:

Today's dispenser is expected to provide many various eyewear services. One facet of these services should include proper color selection. This decision making process must be facilitated by a working knowledge of the application of color and its resulting ramifications. The patient should receive a color of eyewear which is methodically derived to compliment the individual's unique color characteristics. Determining these color characteristics is defined as "color analysis." The concept of color analysis and its various classifications will be explained to provide an understanding of how different color groups affect an individual's appearance. The result of classifying an individual into a particular color group will enable the dispenser to confidently select from a particular set of colors which is in the patient's best interest.

COLOR ANALYSIS:

The Total Coordinated Look:

Color has been proclaimed to be the keynote to fashion.¹ Tradition dictates that the best dressed are identified by repeating tones in the ensemble.⁴ Properly selected colors provide a harmony with an individual's coloring. This total coordinated look helps create a perfectly blended appearance.

Previous Color Classifications:

There have been many attempts at structuring a generalized guideline to determine what colors and combinations of colors are appropriate for a particular individual. Thus arose the concept of color analysis. In the 1950's, Robert Dorr founded the Color Key Program. In the late 1960's, Beauty For All Seasons was founded by Norma Virgin. Judy Lewis-Crum and JoAnne Nicholson founded Color 1 in 1977. And Color Charisma was founded by Sandy Parks in 1974.

Many methods of color classification were derived, some being more effective than others. Still, the criteria for color classification was ill defined. Generalizations were made based on personal preferences rather than methodical, objective determinations. Statements such as "gold or silver is fashionably correct when worn with any color"⁵ is absolutely inaccurate and obsolete. Some previous classifications were based on hair color. The overgeneralization that "blondes and brunettes were able to wear all colors and needed to avoid none"⁶ inevitably resulted in many

inappropriately color-matched individuals. Men also had very little chance of being properly color classified in the past. It was assumed that "since a man rarely wore the "rainbow" colors, except for extreme casualness or as touches of fashion (i.e. a necktie), the determination of the correct accessory colors was primarily dependent on his choice of ensemble, rather than hues that complimented his own coloring. Black, grey and brown were the three colors recommended for men."⁶ These, and other unqualified assumptions, greatly hindered the development of proper color classifications.

Color Me Beautiful:

In 1981, Carole Jackson revolutionized the concept of color analysis with the publication of her best selling book, Color Me Beautiful. She successfully created a process of identifying colors that particularly enhanced an individual's appearance.³ Carole Jackson had isolated the primary variable required for the accurate color classification of an individual. This variable was skin undertone. Although there were some previous attempts to include skin tone as part of various classifications, none of them grasped the true essence of undertone classification as did Color Me Beautiful. It utilizes a descriptive analogy of seasons. "Just as nature has four seasons, each with its unique colors, every individual has inherited skin, hair, and eye coloring that is most complemented by one of these seasonal palettes."¹ These seasonal palettes harmonize and repeat an individual's natural color pattern.

The physiological determinate of skin undertone is based on whether

there is more hemoglobin or carotene near the skin surface. More hemoglobin near the skin surface results in blue undertones, which are classified as 'cool' seasons. Cool seasons are Winter and Summer. They are sister seasons. More carotene near the skin surface results in golden (or yellow) undertones, which are classified as 'warm' seasons. Warm seasons are Autumn and Spring. They are sister seasons. Winter and Autumn are the strong seasons with the darkest colors, while Spring and Summer are more delicate with lighter, softer colors.²⁰ Since the correct seasonal palette will maximally complement a person's undertone, there is a natural tendency to gravitate toward the season whose colors make us feel most attractive.¹⁷

Even though skin tones, hair color and eye color differ in the four seasons and even within a particular season, a person will always fall into the category of either cool or warm. Also, an individual's season will never change, even though outer skin coloring may change (usually due to a suntan). The aging process also changes the outer skin coloring. Nevertheless, skin undertone remains a lifelong constant.¹³

Cool Seasons: Winter and Summer.

A winter looks best in primary, clear, vivid colors. High contrasting, very saturated, or icy colors are complementary to the Winter. Only Winters can wear pure white and pure black. Winters cannot wear any pastels or any browns. Cool seasons cannot wear orange.

The most common skin tone for Winters are light to dark olive. Also, most Orientals and Blacks are Winters.¹⁵ It can be easy to initially assume

that a suntanned person might be a warm season, but may very well be a cool season.²⁰

Although a Winter's eyes can be many colors ranging from black-brown to grey-green to dark blue-violet, they are almost always deep, dark and penetrating. Most Winters have dark brown eyes.

When thinking of Winters, think 'black and white.'

Summers have more delicate coloring and lighter hair and eyes, in contrast to Winters who have more vivid coloring and darker hair and eyes.¹⁷ Summer colors are softer and always muted or blended.²⁰ The colors of a Summer include exquisite pink and blues, and soft grayed-down colors, mostly pastels.²⁰ Summers, like Winters, also cannot wear orange.

Summer's eyes have gray shadows with a murky or dusty look to them.²⁰ Most have blue eyes and very few have dark brown eyes.¹³ They also may have blue eyes with a brown ring around the pupil. Both Summers and Winters often have gray-rimmed eyes.¹³

When thinking of Summers, think 'pink and blue.'

Warm Seasons: Autumn and Spring.

Autumns, like Winters, generally have dark hair, dark eyes, and vivid coloring. The colors of Autumn are spectacular oranges, rusts, and browns. All are bold, rich, earthy tones.²⁰ Peach colors also complement the Autumn well. Autumn is the only season that can wear olive green, orange and dark brown. They cannot wear pink.²⁰

Autumns have a golden orange undertone. The undertone is darker and more vivid than Springs. Springs have lighter yellow undertones.¹³

Autumn eyes are often green to brown-green. They often are speckled, in contrast to the common spoke pattern of Winter eyes. Autumns rarely have blue or gray eyes.

When thinking of Autumns, think 'orange and brown.'

Spring colors are clear, crisp, bright and delicate. They have a camel-peach look.²⁰ Spring colors are very radiant. Chartreuse green is for Springs only. Springs can wear a light, true blue. This is the only exception to the rule that no season can mix cool and warm colors. Springs are based on a yellow undertone, whereas a light true blue is a cool undertone color.¹³

Springs have a yellow undertone, much softer than Autumns. Springs often have freckles. They also can have a ruddy facial color which may initially portray the appearance of a cool undertone.

Spring's eyes are clear and are usually greens or blues. They have very light, delicate coloring. Brown eyes are rare in Springs.

When thinking of Springs, think 'camel and peach.'

Table 1 (page 6a) is an excerpt from Color Me Beautiful (pages 66-69). It lists the various colors of each seasonal palette. This table serves as a useful reference to help visualize the variations of colors unique to each seasonal palette.

Of all the seasons, Winter is the most common, followed by Summer. Springs are third and Autumns are the rarest of all.¹³ Cool seasons make up approximately 80% of the population while the warm seasons make up only about 20%.¹³

TABLE 1

SEASONAL PALETTES

	<u>WINTER</u>	<u>SUMMER</u>	<u>AUTUMN</u>	<u>SPRING</u>
White	Pure White	Soft White	Oyster White	Ivory
Beige	Gray-Beige (Taupe) Icy Taupe	Rose-Beiges	Earth Beiges Gold-tone Beiges, including Camel	Clear Beiges Creamy Beiges, including Camel
Gray	True Grays, from Icy to Charcoal	Blue-Grays. Light to Medium	No Gray	Warm (Yellow) Gray. Light to medium
Brown	No Brown No Tan	Rose-Browns Cocoa	Dark Brown, Most Browns and Tans. Coffee, Bronze, Mahogany	Golden Browns, ClearTans
Black	Black	No Black	No Black	No Black
Navy	Any Navy	Grayed Navy	No Navy	Light Clear Navy
Blue	True Blue Royal Blue Icy Blue	Gray-Blue (including Denim) Sky Blue Periwinkle Blue Powder to Medium Blue	Teal Blue Deep Periwinkle	Light Royal Blue Periwinkle Blues, Light to Dark
Turquoise	Hot turquoise Chinese Blue Icy Aqua	Pastel Aqua	Turquoise	Medium Warm Turquoise Clear Aquas
Green	Light True Green True Green Emerald Green Icy Green	Blue-Greens, Pastel to Deep	Grayed Yellow- Greens Yellow-Greens, Lime to Bright Earth Greens, Olive, Moss, Jade, Forest	Clear Yellow-Greens Pastel to Bright

TABLE 1 (cont.)

	<u>WINTER</u>	<u>SUMMER</u>	<u>AUTUMN</u>	<u>SPRING</u>
Orange	No Orange	No Orange	All Oranges Deep Peach, Salmon, Rust, Terra Cotta	No Oranges Apricot, Peach, Salmon, All Corals, Light Rust
Pink	Shocking Pink Deep Hot Pink (Blue) Magenta, Fuchsia Icy Pink	All Pastel Pinks (Blue) Deep Rose Blue-Pinks	No Pink	All Peachy (Yellow) Pinks
Red	True Red Blue-Reds	Watermelon Blue-Reds Raspberry	Orange-Reds Bittersweet Dark Tomato	Clear Red Orange-Reds
Burgundy	Bright Burgundy	Burgundy, including Maroons and Cordovans	No Burgundy	No Burgundy
Gold	No Gold	No Gold	Yellow Golds	Clear Gold
Yellow	Clear Lemon Yellow Icy Yellow	Light Lemon Yellow	Yellow-Gold	Bright Golden Yellow
Purple	Royal Purple Icy Violet	Plum Soft Fuchsia Mauve, Orchid, Lavender	No Purple	No Purple

The Effects of the Right and Wrong Colors:

"Wearing correct colors makes a person's skin look clearer, adds highlights to the hair, and draws attention to the eyes. This color harmony also minimizes unattractive features like circles under the eyes and lines around the mouth."¹⁷ Table 2 (page 7a) more completely lists the affects of right and wrong colors.²⁰

Draping:

A simple method of determining whether a person is a cool or warm undertone is to use large metallic gold and silver fabric samples. Hold the fabric samples so that the top edge of the fabric is held just under the chin and the top part of the person's clothing is covered up.¹⁷ The best place to detect the tone change is the earlobe and jawline.

The silver/gold draping method only differentiates between cool and warm seasons, not between Winters versus Summers and Autumns versus Springs. In order to differentiate between all four seasons, a cross-draping method is utilized using "Key Colors". See Table 3 (page 7b).²⁰

It is important not to judge the color, but the effects of color on the face. Patients with excess makeup or tinted hair make this judgement process more difficult. Therefore, in some instances, it will be necessary to remove the makeup and cover the hair.³

This has been a brief overview describing the concept of color analysis, taking into account various elements and considerations. It is by no means

TABLE 2
EFFECTS OF RIGHT AND WRONG COLORS

- I. Words or terms that can be used to describe the skin changes during draping:
 - A. The wrong colors will:
 - deaden the skin.
 - wash out.
 - sallow.
 - turn the skin muddy.
 - dull.
 - cause nothing interesting to happen.
 - B. In the right colors the skin will appear to:
 - sparkle.
 - bring back five to ten years of youthfulness.
 - have a clear complexion.
 - come to life.
 - radiate.
- II. In the wrong colors, all of the wrong things will show up, such as:
 - blemishes.
 - freckles.
 - circles under the eyes.
 - "mustache" or facial hair.
 - age spots.
 - a larger nose.
 - a nose appears redder.
- III. In the right colors, all of the negative fades into the background and all you see are the beautiful features, such as:
 - sparkling eyes.
 - beautiful smile and teeth.
 - halo of hair.
 - everything is in harmony, and they just seem to glow.

TABLE 3
KEY COLORS/CROSS DRAPING

Winter vs. Autumn

*	Black.....	Brown
	Red.....	Orange
	Emerald Green.....	Olive Green
	Royal Blue.....	Teal Blue
	Hot Pink.....	Gold Yellow

Winter vs. Summer

*	Royal Blue.....	Light Blue
	Black.....	Rose Brown
	Red.....	Pink
	Emerald Green.....	Light Blue-green

Autumn vs. Spring

*	Orange.....	Coral
	Dark Brown.....	Camel
	Gold.....	Yellow
	Olive Green.....	Bright Green

(*) signifies the Key Colors which are initially used in cross draping between seasons. These colors represent the most dramatic comparison relative to the remaining colors in the seasonal palettes.

a complete guide on the classification procedure. Please remember that a complete color analysis is necessary in order to determine an individual's seasonal palette. The purpose of this overview is to familiarize the reader with the concept of color analysis so as to further apply it to the selection of personalized eyewear.

PERSONALIZED EYEWEAR:

Eyewear as a Fashion Accessory:

"...In the world of ophthalmic dispensing there are more misleading observations made and written about frame color than about any other aspect of eyewear. The teachings and urgings attempted with respect to these colors have necessarily been empirical or frankly promotional. Many guides are offered concerning the color of spectacle frames, guides that are often conflicting or merely academic."⁷

A once predominant rule of eyewear dispensing was the lighter the hair color, the lighter the frame, and vice versa. Eyewear has now moved into the category of fashion accessory, and education about skin tones and color is essential.¹⁶ Actually, it has been the explosive interest in color and color analysis that has helped transform eyewear into a fashion accessory. The color of eyewear represents its more interesting aspect. This exploitation of color has helped change eyewear from an unwanted item into a desired commodity.⁷ It seems only natural to apply the principles of color analysis and color coordination to our most important

fashion accessory.¹⁷ Its significance is emphasized by the fact that eyewear is the first accessory seen by others when spoken to.¹³

Cool or Warm:

The color of eyewear must be matched to a particular individual's seasonal palette in order to complement that individual's tone. In order for this match to be accomplished, the dispenser must learn to differentiate warm from cool undertones, and then select the proper frame color based on which undertone was determined.¹³

If there is doubt concerning which undertone a patient has, a dramatic comparison can facilitate the differentiation process. Select a frame which is in the opposite color palette from that which you think the patient should use. If you see the frame instead of the patient's eyes, you have selected the wrong color for that individual. If the frame enhances the skin tone, and brightens the eyes and hair, you have selected from the proper color classification.¹⁷ Also, as was described earlier, gold and silver draping is very effective in quickly determining whether a patient is a cool or warm season.

Frame Color Intensity:

Determining whether a patient has vivid or delicate coloring is fairly easy. This determination helps dictate the intensity of frame color shading. Color shading can be tested to determine whether a frame color is too intense or too light. A frame that is too intense will tend to dominate the face rather than enhance its color. This can often be the

case with Springs and Summers. A look of overall paleness results from too light a frame. This second case occurs more with Winters and Autumns.¹⁷ Therefore, as a general rule, Winters and Autumns can wear more vivid, dramatic eyewear colors while Summers and Springs must wear softer coloring.¹³

Eyewear Colors for the Proper Season:

Some more common frame colors for Springs are camel, golden-tan, medium golden brown, lighter grays with a yellow cast, and yellow gold (not rose-gold). Autumn frame colors can be more bold, such as metallic bronze, copper and dark brown.¹³ Cool undertone frame colors include silver, white gold, black (Winters only), slate blue, rose-blue and violet. A brunette Winter can wear brown frames even though brown is not in the Winter palette. Although, the brown must be a blue-brown. Both Winters and Summers should avoid red-brown tones.⁸ Remember that Summers must wear softer or less intense colors than Winters.

Multi-color frames:

It was once considered that multi-color frames had very little fashion use.⁵ Today, they are not only fashionable, but also functional. A combination of colors in a frame help coordinate with one's wardrobe. When selecting multi-color frames, the colors of the frame must be selected from either the warm or cool palette. It is unacceptable to mix warm and cool colors.¹⁷ An example of a multi-color frame from a cool palette is blue to violet to rose.¹³ Adding lighter colors to a frame that is

too overpowering and dominant helps soften the effect. For example, a dark blue frame could be softened by adding rose tones. The addition of the rose decreases the harshness and bold appearance of the frame. The color used to soften the frame appearance must be from the same selection (cool or warm) as the original color.¹³

Frame Color Selections and Trade Names:

With the overwhelming number of frame colors available today, it can be quite confusing to decide whether a particular color is an appropriate selection. One Optics company, Avante-Garde & BerDel Optics, offers a selection of approximately two hundred thirty eight frame colors ranging from LITENAC to FLOBARK to ELECTRICROSE.¹ Fortunately, they have conveniently categorized their colors into the appropriate seasons. Not all Optical companies do this. The point being, 'trade' color names can be very ambiguous. The dispenser should be able to look at a frame and determine whether it has a blue or a yellow undertone. Every frame has either a blue or yellow undertone. This is the primary determining factor for frame color selection. So, regardless of the change in frame color selections, the blue or yellow undertone is a constant.

Even if a patient comes in wearing the incorrect colors, a frame color should still be selected from the appropriate color category. The right frame color will enhance that patient's appearance since it is most important to wear the correct color near one's face.¹⁷

The Elderly, Children, and Men:

One consideration which may often be overlooked is that color analysis, with all of its applications, should not exclude the elderly, children, or men. The elderly appreciate the extra 'splash of color' added to their life. Children deserve the best possible services, just as adults. Children patients grow up to be adult patients. And even men can be interested in a deviation from the "traditional". Do not be hesitant to present the option of selecting a frame color which is "the best choice" for any patient. You are simply considering the patient's best interests.

Tints:

Tints are a component of eyewear often selected without proper consideration. As a general rule, a cool person would look best in shades of pink/flesh tone tints. A warm person looks best in peach tints.¹⁶ Yellow and gold tints should be avoided because they make the patient look sallow or jaundice. It is best to keep a tint light. Darker tints tend to exaggerate and darken facial shadows.⁹ A soft upper tint enhancing a prominent shade of the frame can be very effective.⁴

A five to ten percent tint is most effective at providing a complementary, harmonizing glow to the face, without overpowering or dominating.⁸

Once a patient is color classified, perfect tints can be made the first time, without need for re-tints.³

Practical Applications in Practice:

The application of color analysis in a professional eyewear setting can be very practical and beneficial. Some offices have frames displayed by color groups with scarves and other accents which help to catch the patient's attention.²

Patients can be analyzed on the spot to determine which frames and tints are most flattering. In most cases, it takes two or three minutes to classify most patients.³ Once a patient is color classified, it can be noted on the patient's permanent record. Therefore, when the patient returns needing a new frame or lenses, the selection process is greatly simplified.³ The incorporation of color analysis into the realm of eyewear dispensing has, in some instances, tripled referrals.³

The feeling of "having to wear glasses" must be subverted. The patients need to be able to proudly display their new eyewear with a sense of individualism. "Your patients leave the dispensing area with your signature across the upper third of their face. And they tell other people, who tell other people. As you increase your skills in eyewear, you'll see your patient load grow. Pretty soon you will have a wonderful following."¹⁶ "In short, the patient must feel that he or she has been 'guided' into the best that frame color can accomplish towards the expression of 'his or her own' personality and convictions."⁷

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The previous material covering color analysis was furnished to guide the reader toward proper frame color selection. The remainder of this paper will devote its emphasis to considerations revolving around facial contour and facial feature analysis. In total, this paper will aid the eyewear dispenser in facilitating the patient's decision making process during eyewear selection.

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* Artwork for facial outlines obtained from Avante-Garde's Dispenser's Guide To Color & Shape, 1987.

Introduction

Today's optometrists are looked upon to make daily professional judgments that encompass a diverse scope of services. The following guide has been prepared in a fashion to serve as a "user-friendly" reference manual readily applicable in the eyecare practitioner's office. It has been designed to quickly present basic guidelines governing the cosmetic considerations involved in eyewear dispensing, one avenue of optometry that is often overlooked.

Although other dictating factors are involved with the proper dispensing of eyewear, the following guide will emphasize frame selection based purely from a cosmetic perspective. Its aim then is to assist the optical dispenser as well as the patient in selecting a cosmetically appealing pair of eyewear.

"Getting Started"

Goal: Cosmetic experts agree, the oval facial contour (as illustrated in figure 1) is considered to be the most ideal and complimentary facial shape.^{1,2,3,5,8,11,12} In reality, the vast majority of individuals possess facial contours that deviate from this "ideal" standard. The primary objective of cosmetic dispensing is therefore to promote the illusion or perception of an oval facial outline while at the same time maintain or even enhance the involved facial feature proportions.¹¹ By manipulating the selection of specific variables on any part of fashion eyewear, the eyewear dispenser has the ability to subdue any existing disproportions among the patient's facial features while accentuating the attractive features.¹¹ On the other hand with improper guidance, these very same disproportions may be further intensified and exaggerated resulting in an undesirable appearance.

A Quick Look At Facial Analysis

The following set of terminology is illustrated in figure 1 to assure clarity.

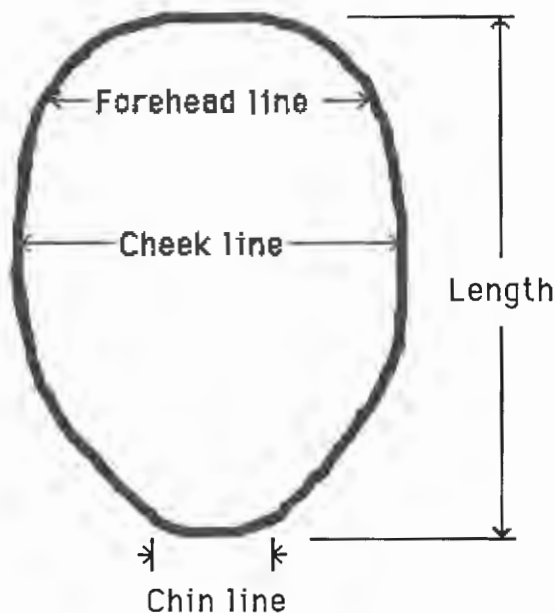


Figure 1. Facial Lines.

Guidelines For The "Ideal & Proper" Fit

A. Arch of the eyebrow in relation to the upper rim.

Undoubtedly, the eyebrows have a significant influence on facial expression. They are a mobile asset to any face and should remain so regardless of the frame style fitted.³

- a) As a general rule, the frame's upper rim should run along the midpoint of the eyebrow during a resting position and conform to the overall contour of the brow (Figure 2).^{2,3,5,11}



Figure 2. Proper Eyebrow Positioning.

- b) Avoid completely exposing the eyebrows above the upper rims. If a noticeably obvious amount of skin is visible between the upper rim and brow, a "perpetual surprised" expression will be created (Figure 3).^{2,3,5,11}

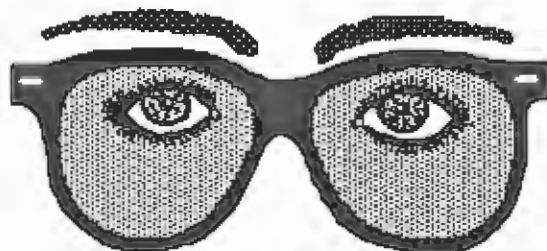


Figure 3. "Perpetual Surprised" Look

- c) Try to avoid allowing the eyebrows to be seen through the lenses. If this occurs, the resulting eyebrow/upper rim relationship will create an undesirable double eyebrow effect (Figure 4). Aside from this awkward appearance, this positioning of the brows will cause a constant brushing against the lenses leading to a more frequent need for cleaning.^{2,3,5,11}

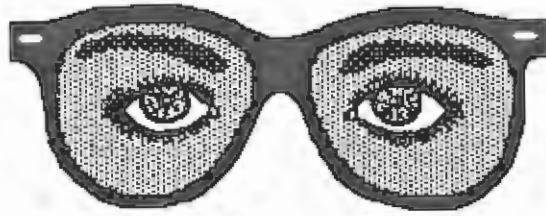


Figure 4. Double Eyebrow Effect.

- d) Recommendations for unusual eyebrow positions and shapes.^{2,3,5}
1. The natural brow that is too high.
 - Select a light shade solid frame color,
 2. The natural brow that is too low.
 - Use a clear bridge.
 - Select a dark shaded upper rim to overshadow the natural brow and produce a higher brow accent.
 3. Uneven heights between the two brows.
 - For men, select a frame with wide heavy upper rims of a dark solid color fitted at the average height between the two brows.
 - With women, may suggest artificially restoring balance between brows using a cosmetic pencil.
 4. Down sloping brows from nasal to temporal.
 - Use a frame with upper rims that are level and not up-sweeping to avoid a conflicting appearance.
 - Upper rims may be fitted a bit higher than normally advised.
 - If a women, may suggest artificial reshaping of the brows to an upswept fashion to produce a more youthful expression to the face although it should be noted that it will be difficult to produce much of a change while employing this strategy.^{2,3}
 - Most women's fashion frames are designed with an upswept upper rim.

B. Nasal edge contour, depth of lens shape and frame width.

- a) In general at this time, the frame width should be equal to the widest point on the facial outline (Figure 6) although this guideline varies according to styling trends.
- b) Upper and lower rims should be separated by about 25% of the vertical length of the face (Figure 6).¹¹
- c) Nasal edge of rim should comfortably conform to the contour of the nose.
- d) A longer nose will require a deeper "B" lens dimension whereas a shorter nose will call for just the opposite (see page 17).

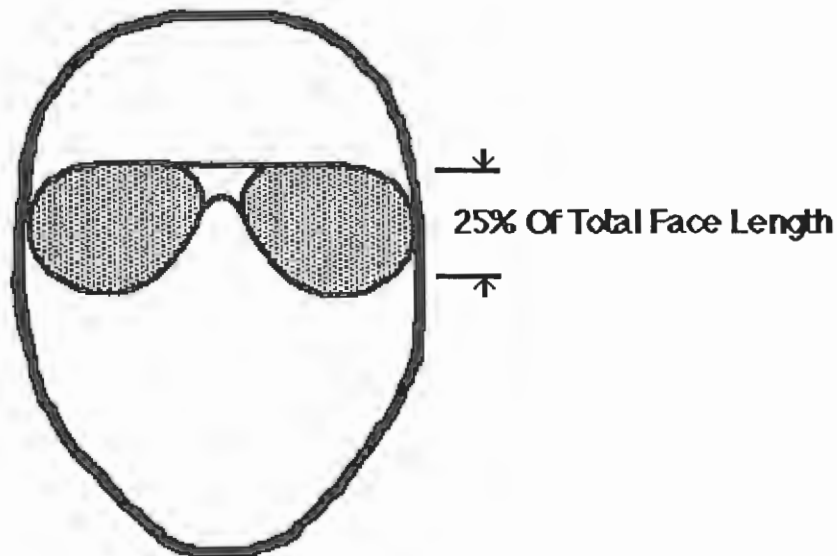


Figure 6. Ideal frame width and lens depth ("B" dimension).

C. Lower rim contour.

- a) For elderly patients and those individuals who want to avoid a "sagging" appearance of the eyes, avoid a lower rim shape that has a downward slant.^{2,3}
- b) The lower rim should be shaped and positioned so that it lies symmetrically beneath each eye.⁵ By doing so, the lower rim helps to camouflage any lines or wrinkles in the skin beneath the eye.⁵
- c) The lower rim should not curve upward nasally at a point closer to the nose than where the pupil is centered (distance between the apexes of the lower rim curves should not be narrower than the P.D.) while at the same time should not curve in such a manner as to limit the useable bifocal segment area.⁵

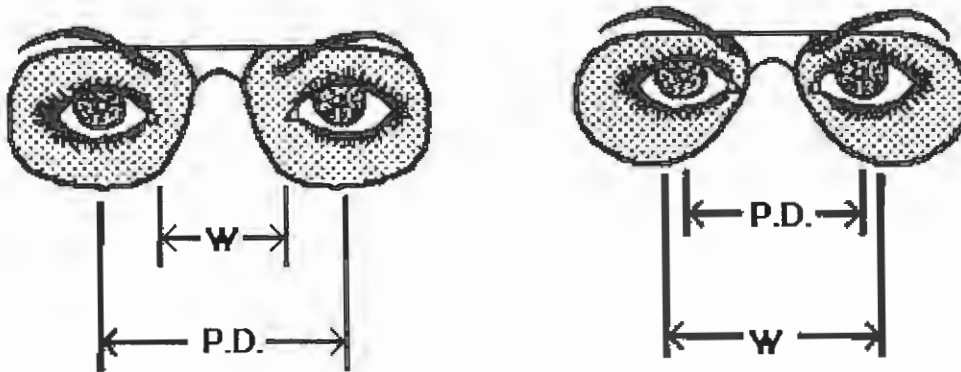


Figure 7. P.D. > W

Correct Relationship

D. Facial lines and curves of visual attention.

- a) The dominant facial line is the facial contour itself. Secondary facial lines of visual attention include:¹¹
 1. **Size or shape of the nose.**
 2. **Forehead line.**
 3. **Hairline.**
 4. **Cheek line.**
 5. **Jaw line.**
- b) A generally accepted rule of thumb governing frame shape selection is to **never repeat an unattractive or domineering facial line.**^{3,5} Repetition of such a line will only serve to emphasize and intensify the original line while subduing any other existing facial lines that are in need of more visual emphasis. Figures 8 & 9 illustrate this effect. (Note: Contrary to this, British fitting philosophy calls for repetition of the facial contour outline.)⁹

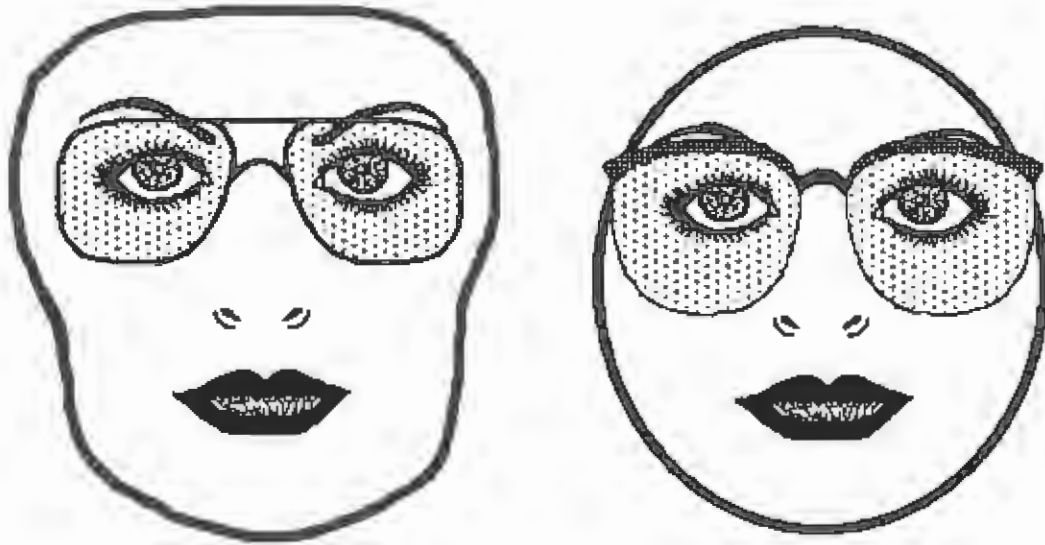


Figure 8. Repetition of the facial contour line.

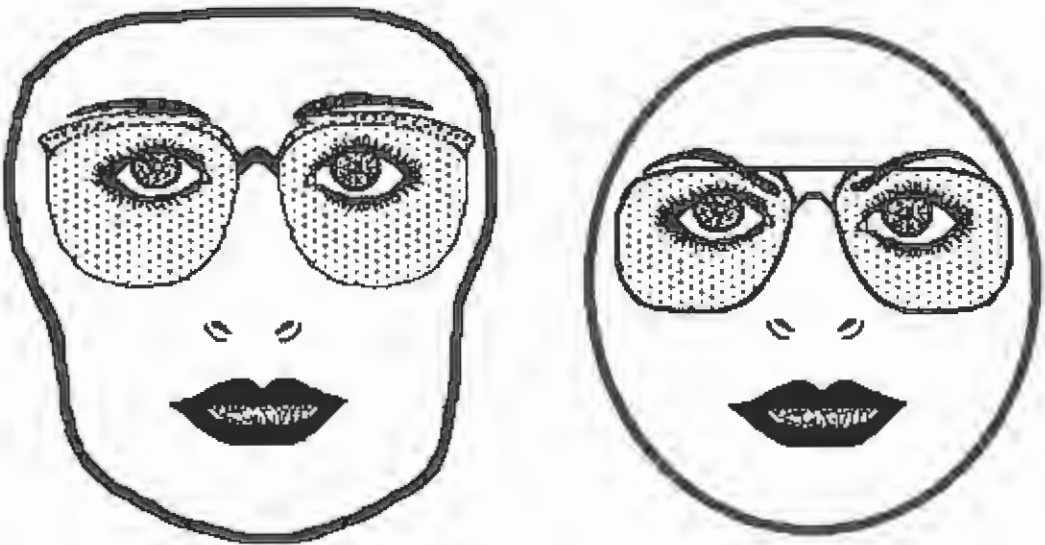


Figure 9. Contrasting lines.

E. Frame thickness.

- a) In general, frame thickness should be in direct proportion to the actual facial features and not the overall body stature.¹¹ Bigger and broader facial features demand a thicker frame where as petite and soft facial features calls for a thin or rimless frame style. Frame thickness is also governed by trends set by the latest fashion.¹¹
- b) Frame thickness should not overpower the facial features.

Eyewear Dispensing Techniques That Enhance Facial Contour & Feature Proportions

A. "Fill Out".

- a) "Fill Out" is a fitting technique which takes advantage of the fact that an observer perceives the outmost point or boundary of a frame's endpiece as the extreme edge of the facial outline.¹¹ "Fill Out" is an effective technique which compensates for the empty visual space evident in certain facial contours. Frame and lens surface area are used to fill in facial regions with inadequate visual attention. Figures 10 and 11 illustrate two practical applications of "fill out".

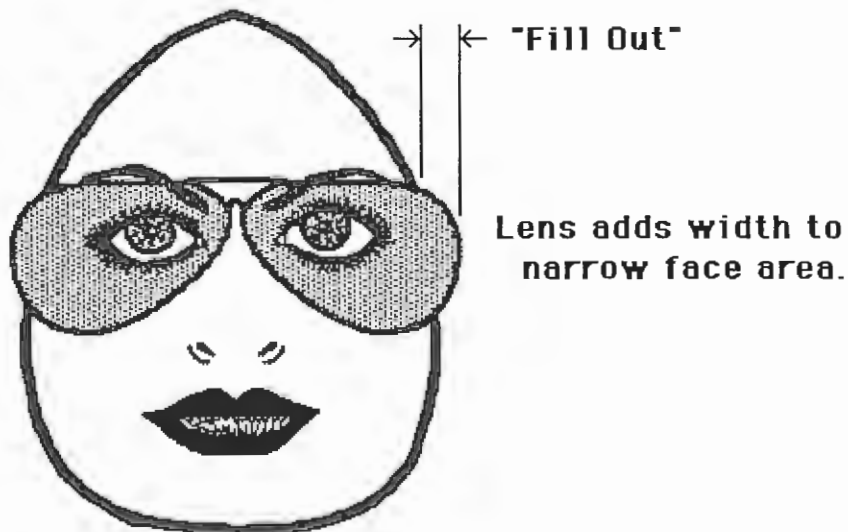


Figure 10. "Fill Out" applied to upper facial region.

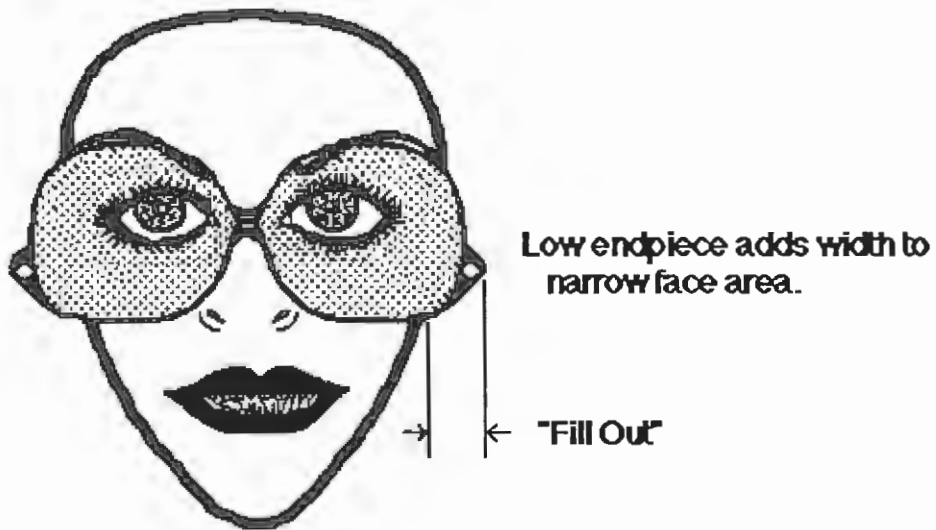
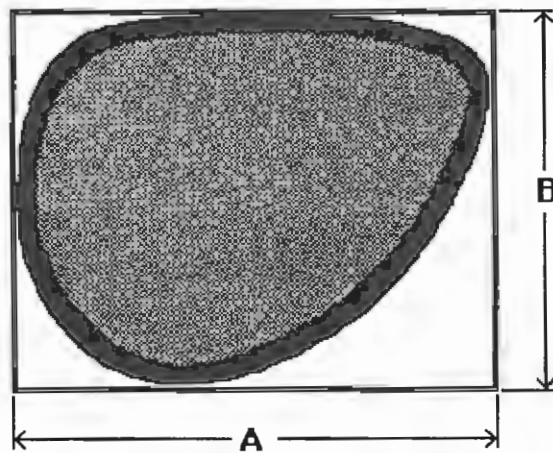


Figure 11. "Fill Out" applied to lower facial region.

Lens Dimension Terminology



A = Lens size
B = Lens depth
(A - B) = Lens difference

B. Fitting techniques to modify facial length.

1. "B" lens dimension.

- a) To a significant degree, apparent facial length is visually extrapolated from the amount of facial area exposed above and below a lens.¹¹ Due to the versatile nature of hairlines, the amount of facial area exposed below a lens plays a much more crucial role in modifying overall facial length. See figure 13 below.

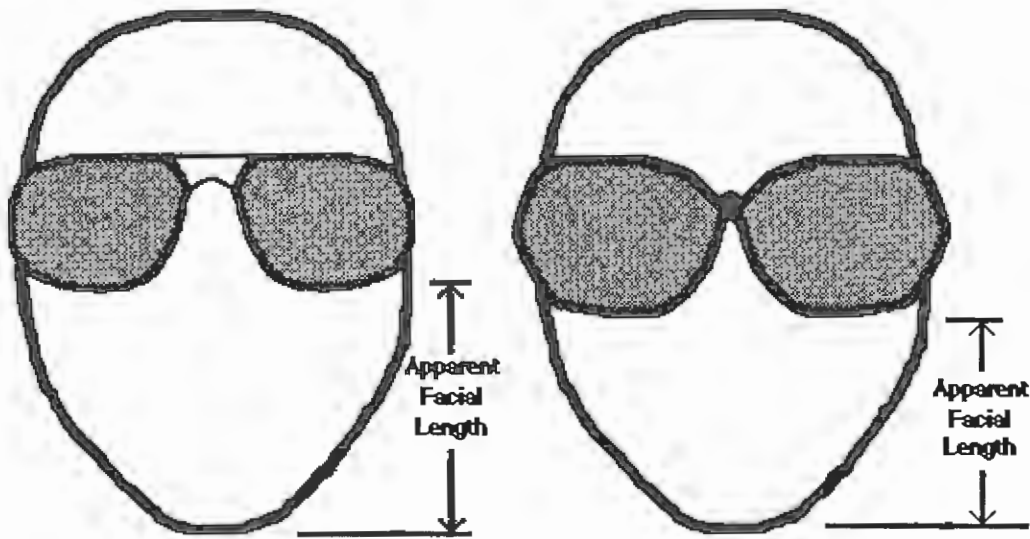


Figure 13. "B" lens dimension and its effect on apparent facial length.

2. Thickness and color of the bottom rim.
 - a) Selection of a frame with a heavy and darkly shaded bottom rim will provide a more pronounced demarcation effect between the frame's lower boundary and the lower facial region.¹¹
 - b) A face wearing a rimless style frame will visually appear to be longer than a face fitted with a solid heavy frame due to the perceived increase in exposure of the lower facial region (Figure 14).¹¹

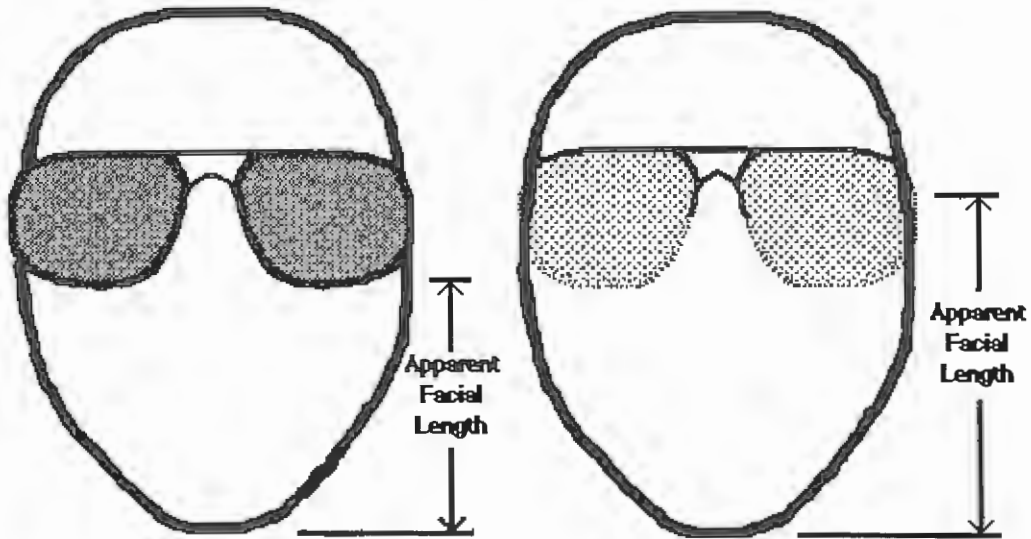


Figure 14. Influence of bottom rim color and thickness on facial length.

3. Frame width.
 - a) The frame width is another parameter that can be manipulated to influence overall facial length. Widening a frame will serve to promote emphasis on the horizontal facial line and draw attention away from the vertical facial line resulting in an illusion of a shorter facial length.¹¹
 - b) On the other hand, a face may be made to appear narrower by reducing the frame width. This serves to reduce emphasis on the horizontal facial line while allowing the vertical facial line to dominate (Figure 15).¹¹

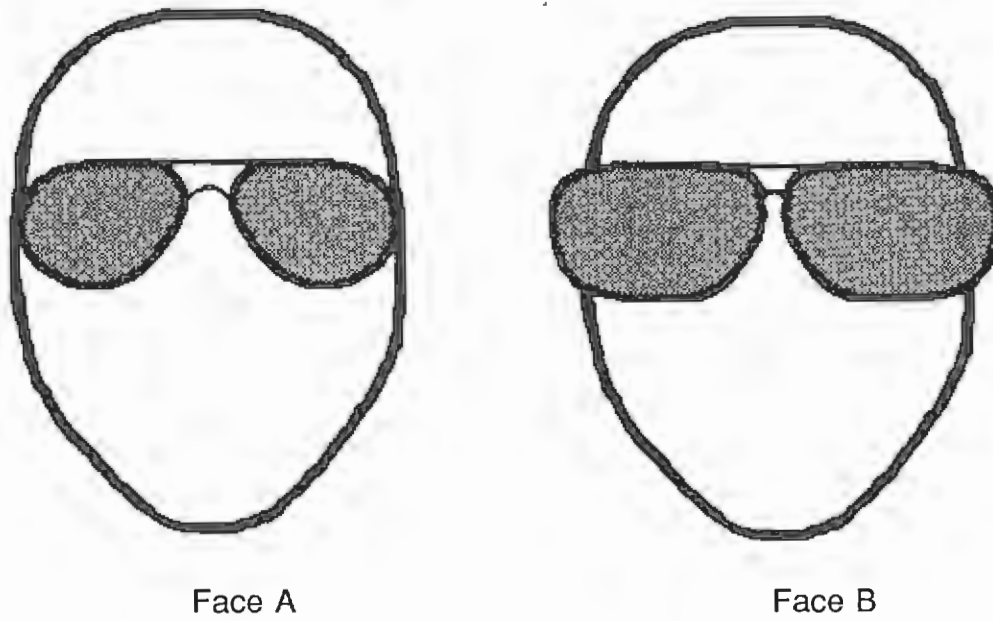


Figure 15. Increased frame width makes face B appear shorter in length.

- c) A word of caution: With a high minus (-) prescription due to optical distortions from an induced prismatic effect, the sides of the face as seen through the lenses may appear to be deflected inward creating an awkward appearance.¹¹ Reducing lens size will help to resolve this problem (Figure 16).



Figure 16. Deflection of facial edges with high minus R_x .

4. Endpiece height.
- a) In the same fashion that endpiece location has an influence on perceived facial width, endpiece height can be variously positioned to affect apparent facial length.¹¹
 - b) An observer uses the endpiece height as one reference point in judging overall facial length. By varying its height, perceived facial length can also be varied. The higher the endpiece, the longer the face appears. The lower the endpiece, the shorter the face appear. See figure 17 below.

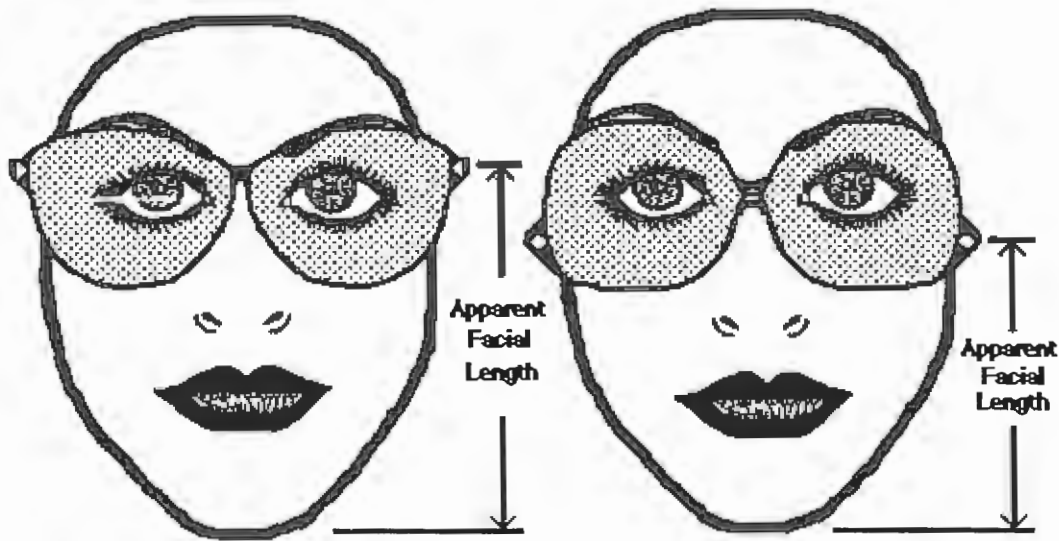
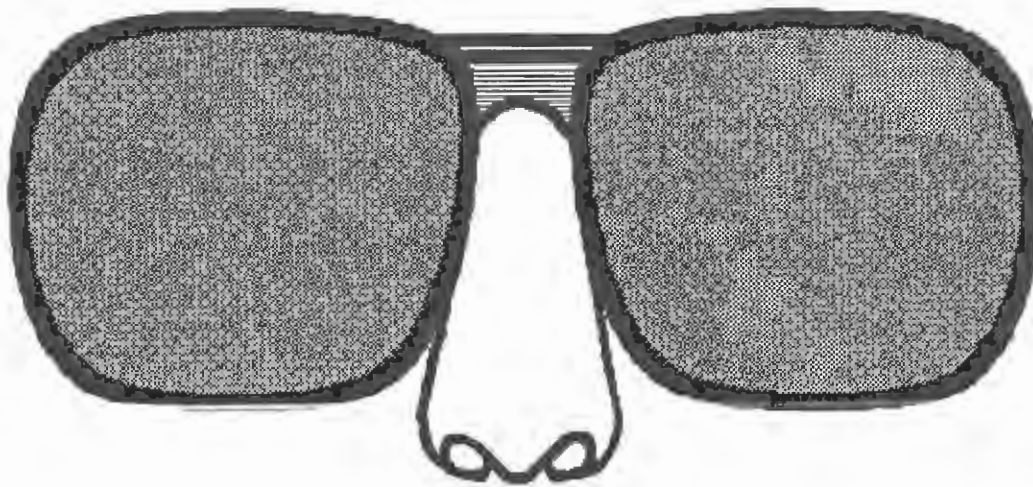


Figure 17. Endpiece height and its influence on apparent facial length.

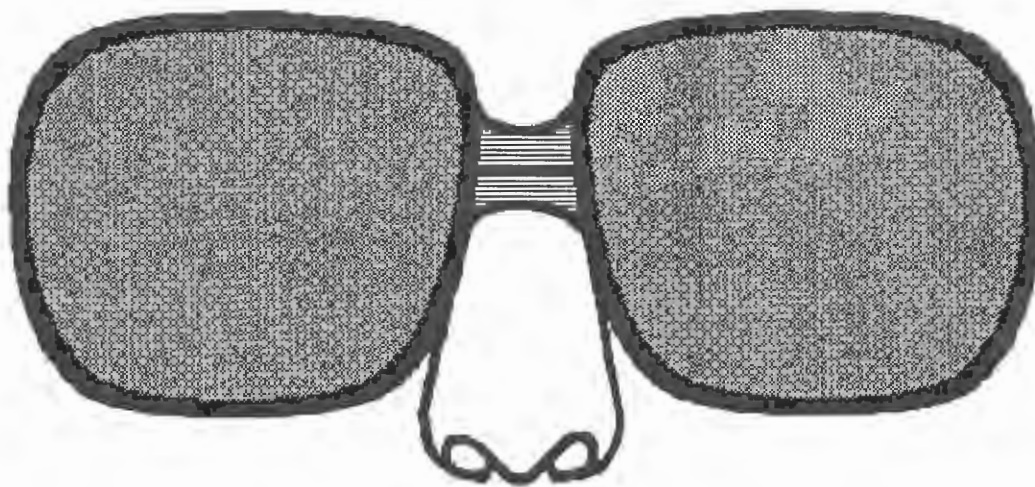
C. Fitting techniques to modify nose size.

1. Bridge crossbar height.

- a) One visual reference point in determining apparent nose length is the bridge crossbar. By varying the height at which the bridge is fitted, one's nose can be made to appear longer or shorter.¹¹
- b) A higher crossbar creates the illusion of a longer nose. A lower crossbar on the other hand will make the nose appear shorter in length (Figure 18).



High bridge crossbar = longer nose

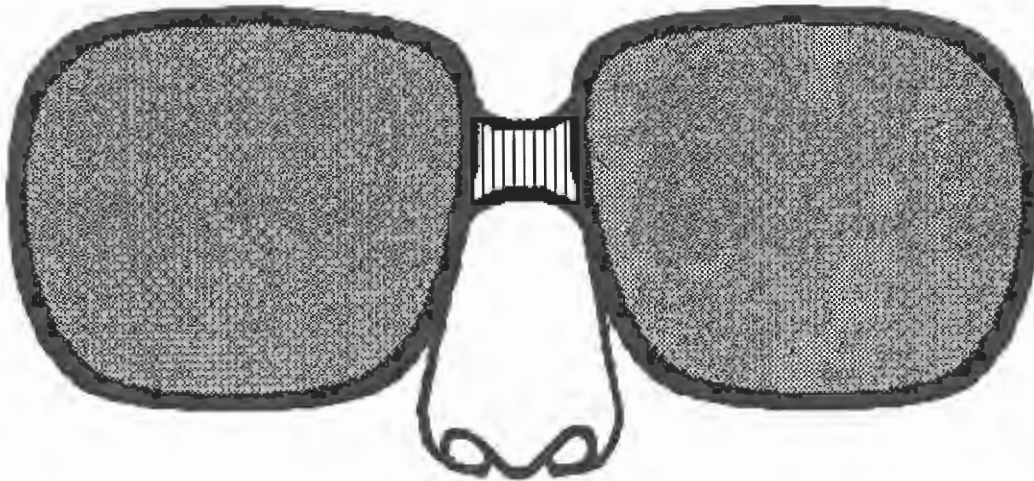


Low bridge crossbar = shorter nose

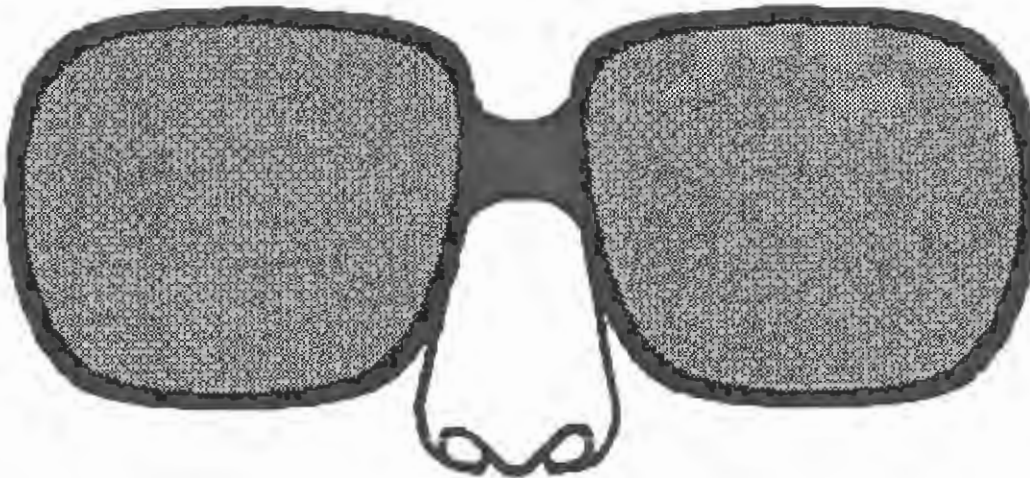
Figure 18. Bridge crossbar height and its effect on apparent nose size.

2. Bridge crossbar color.

- a) The color of the bridge crossbar plays a significant role in accenting its effect as a visual reference point.¹¹
- b) A darker bridge color will have a more pronounced effect in delineating an upper boundary of the nose than a lightly colored bridge. In addition to crossbar height, a darker bridge will help define and limit the perceived length of the nose. (Figure 19).



Lighter colored crossbar = longer nose

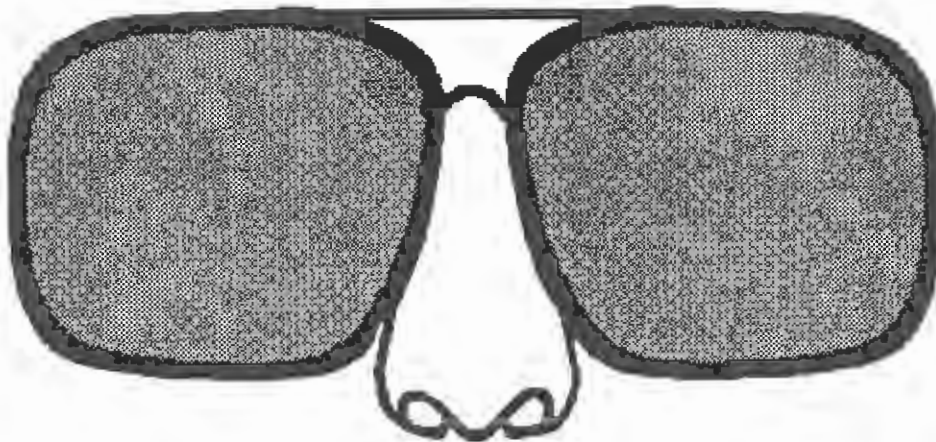


Darker colored crossbar = shorter nose

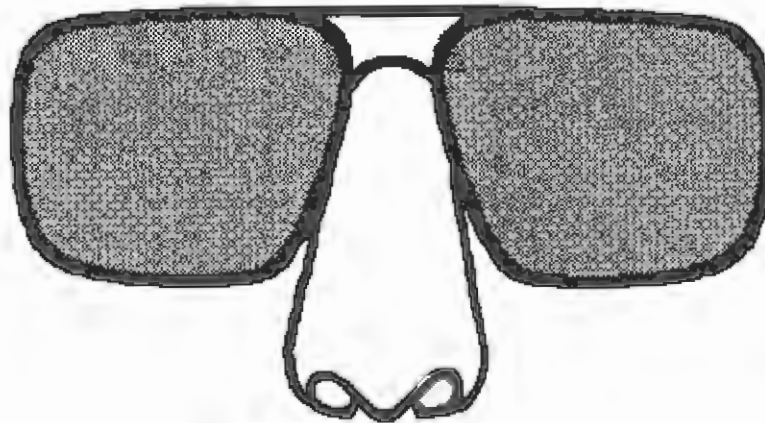
Figure 19. Crossbar color and its effect on apparent nose length.

3. "B" lens dimension.

- a) In a similar manner in which the "B" lens dimension has an effect on apparent facial length, this same frame parameter may be used to modify apparent nose length.¹¹
- b) A deeper lens depth will serve to shorten the nose whereas a more shallow lens design will help to lengthen a nose (Figure 20).



Taller "B" dimension = shorter nose

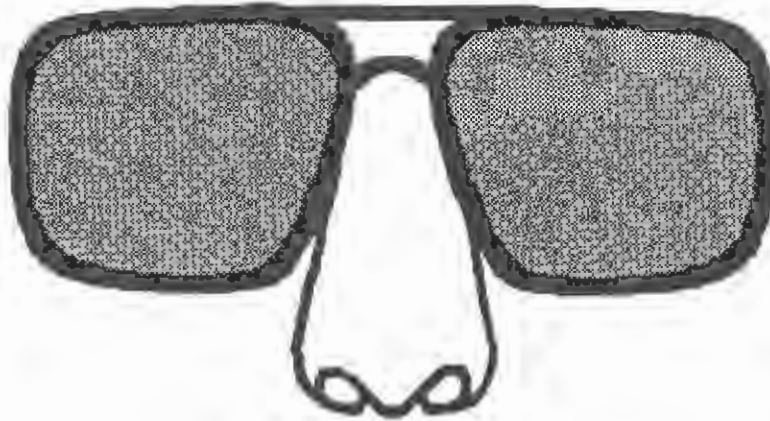


Shorter "B" dimension = longer nose

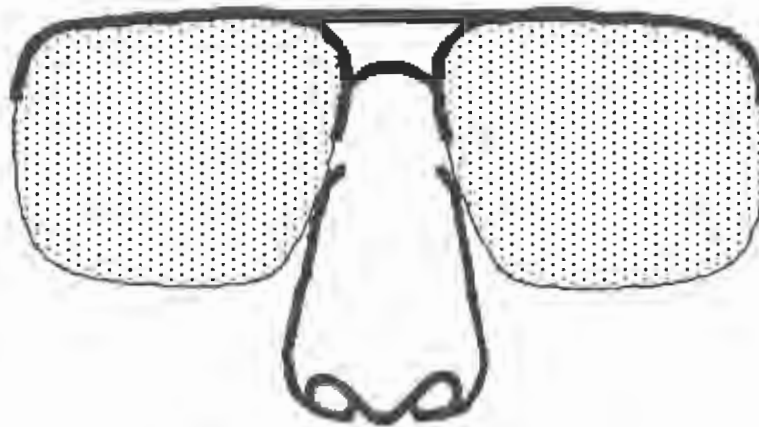
Figure 20. Lens "B" dimension and its effect on apparent nose length.

4. Bottom rim thickness and color.

- a) Again, as in the case of altering apparent facial length, the color and thickness of the bottom rim can be used to modify apparent nose length.¹¹
- b) A darker lower rim will help to shorten the nose while a lightly colored or rimless bottom rim will serve to lengthen the nose (Figure 21).



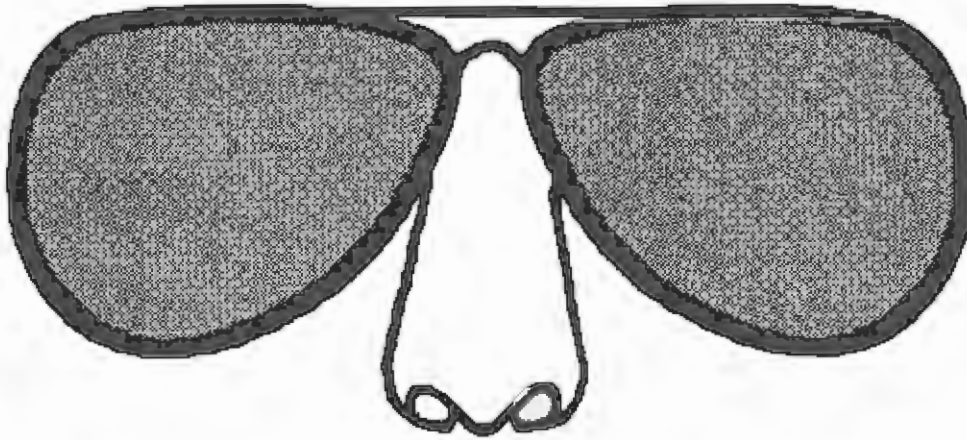
Darker lower rim = shorter nose



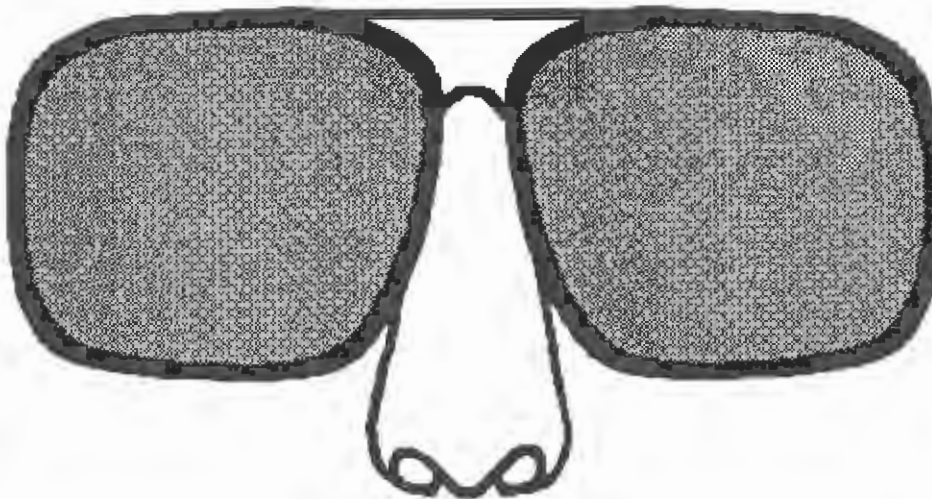
Lighter lower rim = longer nose

Figure 21. Lower rim color and thickness and its effect on nose length.

5. Bottom rim shape.
- a) The shape of the bottom rim can be varied to increase or decrease the perceived area of nose that is exposed.¹¹
 - b) Increased nose exposure produces the illusion of a longer nose whereas minimal nose exposure reduces the apparent length of the nos (Figure 22).



Increased nose exposure = longer nose

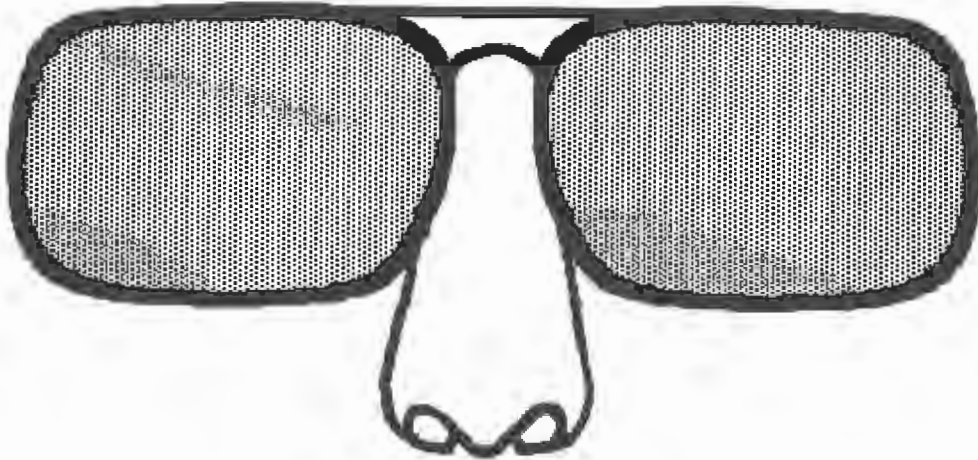


Minimal nose exposure = shorter nose

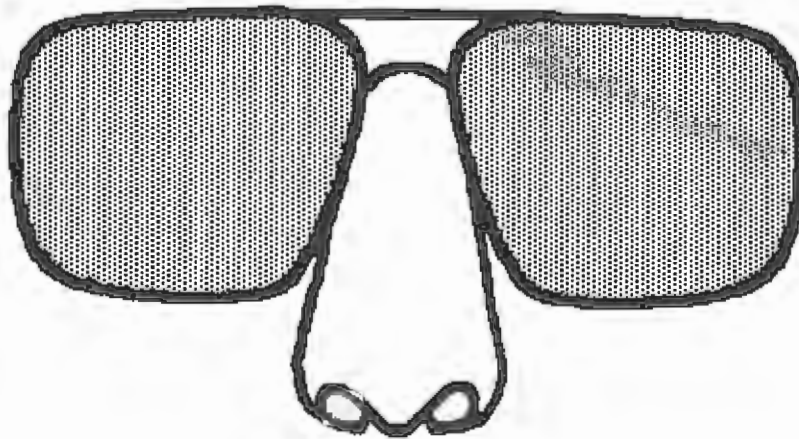
Figure 22. Bottom rim contour and its effect on apparent nose length.

6. Frame width.

- a) Varying frame width can help to transfer visual attention away from a vertically long nose by increasing emphasis on the horizontal facial line. By doing so, a long nose can be made to appear shorter (Figure 23).¹¹
- b) To avoid overwhelming a short nose, keep the frame width to a minimum.



Wider frame width = shorter nose



Minimal frame width = longer nose

Figure 23. Frame width and its effect on apparent nose length.

D. Fitting techniques to alter apparent P.D.

1. Wide set eyes (large P.D.).¹¹

- a) Goal here is to reduce the apparent P.D. (Figure 24).
- b) Start by selecting a thicker, darker low bridge crossbar to minimize exposure of the facial surface area between the eyes.
- c) A wide bridge will help to decrease the nasal lens area between the eyes as seen through the lens and the frame bridge.
- d) Increase frame width to increase the temporal lens area between pupil and lens edge as seen through the lens. The eyes will appear to center better within the frame of the lens shape.
- e) A thinner less obtrusive endpiece area will also help to increase surface exposure on the temporal edge of the lens.

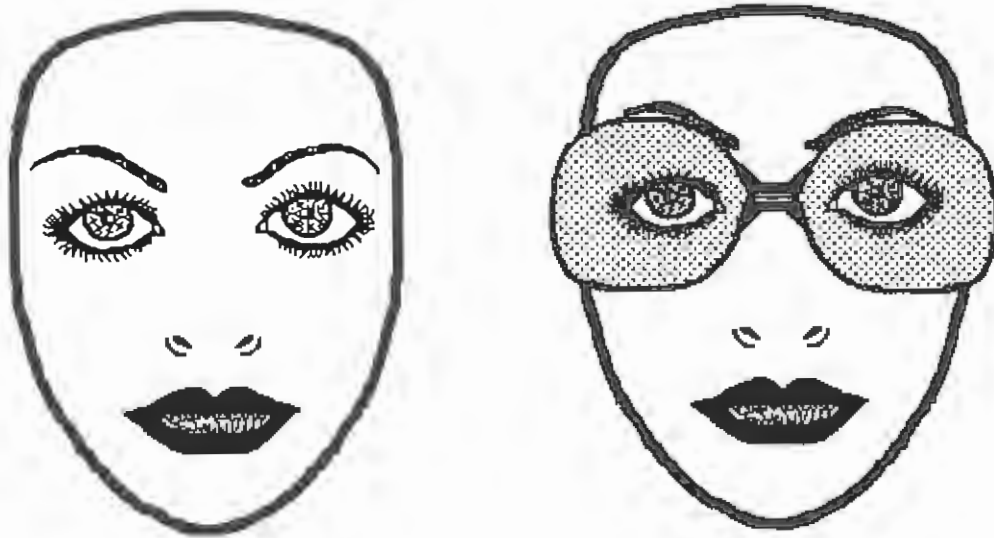


Figure 24. Fitting technique to decrease the apparent P.D.

2. Narrow set eyes (small P.D.).¹¹

- a) Goal here is to increase apparent P.D. (Figure 25).
- b) A thin, clear and high bridge crossbar will help to maximize and reveal more facial surface between the eyes. This will produce an illusion of a wider P.D..
- c) A narrow bridge width will increase the perceived area between the pupil and frame bridge as seen through the lenses.
- d) Select a narrow frame width to decrease the lens surface area temporal to the pupils as seen through the lenses. This will help to center the eyes better within the frame of the lens.
- e) An endpiece area that is wider and more pronounced will help to cover the excessive facial area temporal to the pupils and create the illusion of a narrower face.

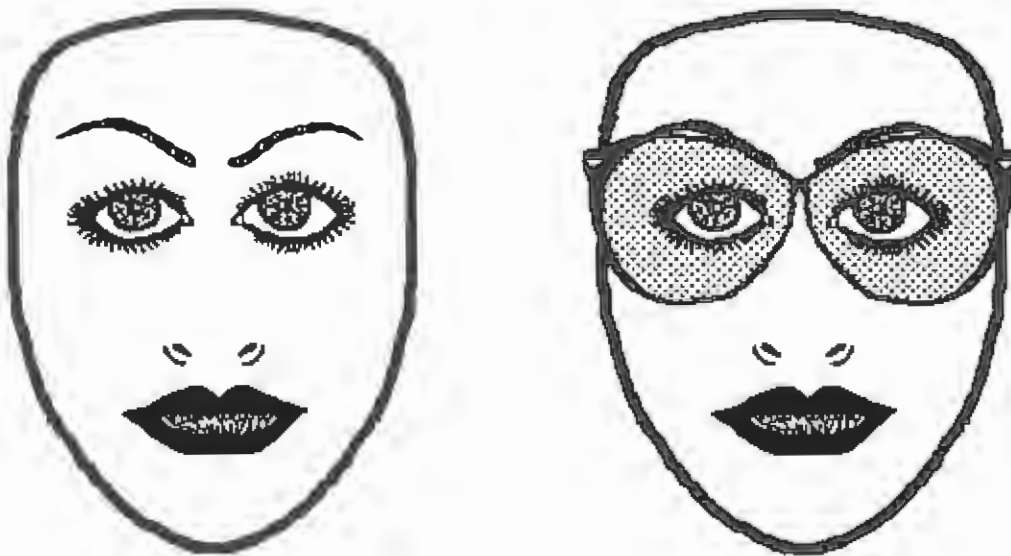
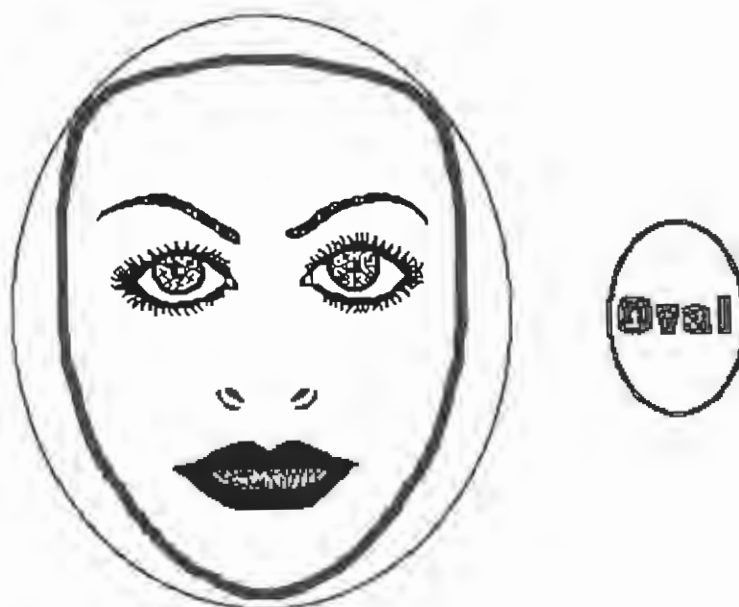


Figure 25. Fitting technique to maximize apparent P.D.

Putting It All Together

Guide To Different Facial Contours And Fitting Recommendations For Each Facial Category

The following is a basic guide to aid the optical dispenser and patient in identifying which facial category applies to his/her individual face. Eight different categories are listed each with its own specific recommendations. One may run across the instance where an individual's face does not fall into one specific category. It is likely that a combination of two or more of the listed categories will apply for some faces. Balancing the different recommendations for each category will help to achieve the ideal fit.

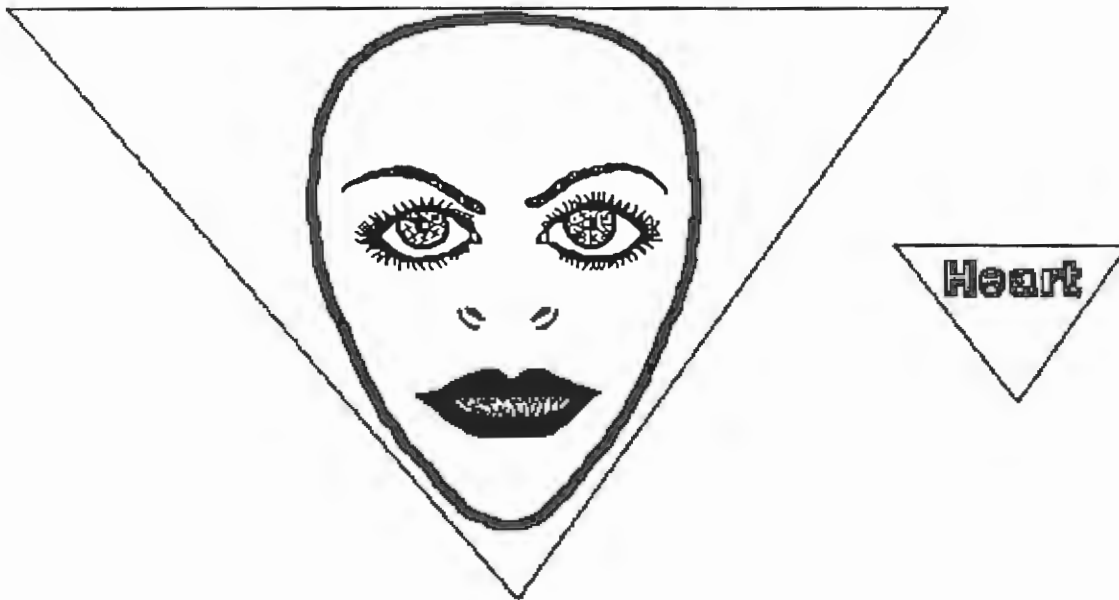


Descriptive and Identification Cues: 1,2,3,5,9,11

1. Considered to be the ideal and most well-balanced facial outline.
2. Somewhat egg-shaped where the top half is nearly balanced with the bottom half.
3. The forehead is slightly wider than the chin.
4. Cheekbone width is about $\frac{3}{4}$ the length of the face.

Recommendations: 1,2,3,5,9,11

1. The oval face is complimented by nearly any frame shape.
2. Avoid extreme geometric and "new wave" designs.

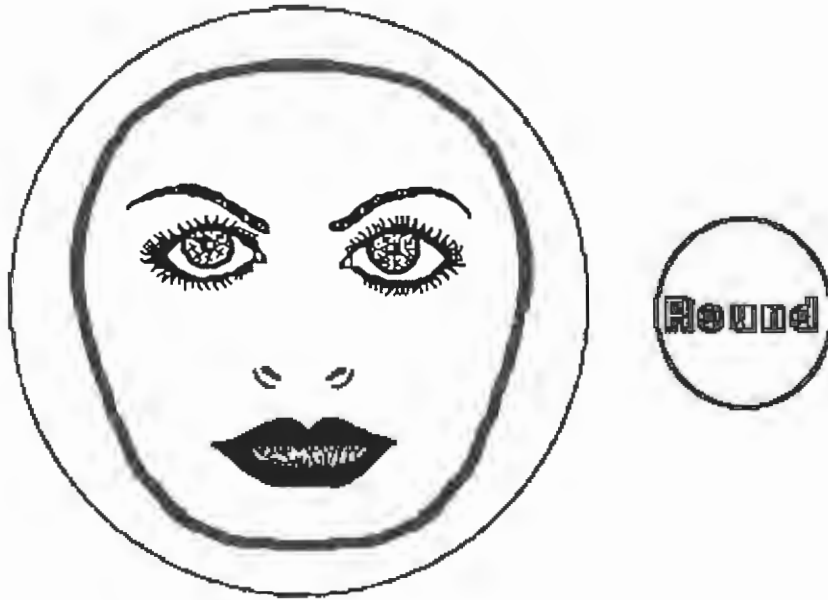


Descriptive and Identification Cues: 1,2,3,5,9,11

1. A broad forehead which is the widest part of the face.
2. Face gradually narrows toward the mouth creating a somewhat pointed chin.
3. The lower half of the face is disproportionately small relative to the top half.

Recommendations: 1,2,3,5,9,11

1. Aim is to minimize emphasis on the frame and upper region of the face and to "fill out" the lower portion of the face.
2. Try to make the forehead appear narrower by adding width to the cheek and chin regions of the face.
3. Select a thin rimmed or a rimless mounting that won't overwhelm the face.
4. Choose a slender design with minimally protruding and non-pointed temporal endpieces to avoid adding width to the upper facial region.
5. Try to fit frame temples flush against the sides of the head. Endpieces should be low to "fill out" lower facial region.
6. Select a lens shape that is roundish in nature with gently curved oval lines.
7. Aviator and butterfly styles may help to balance out the bottom of the face.
8. Lens dimensions should have a large difference (longer horizontally).
9. A soft to light color frame should be utilized.
10. Avoid any large and heavy frame with a deep lens shape.

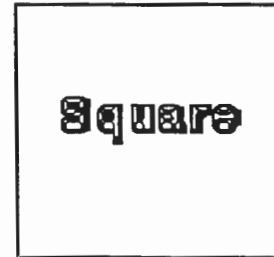
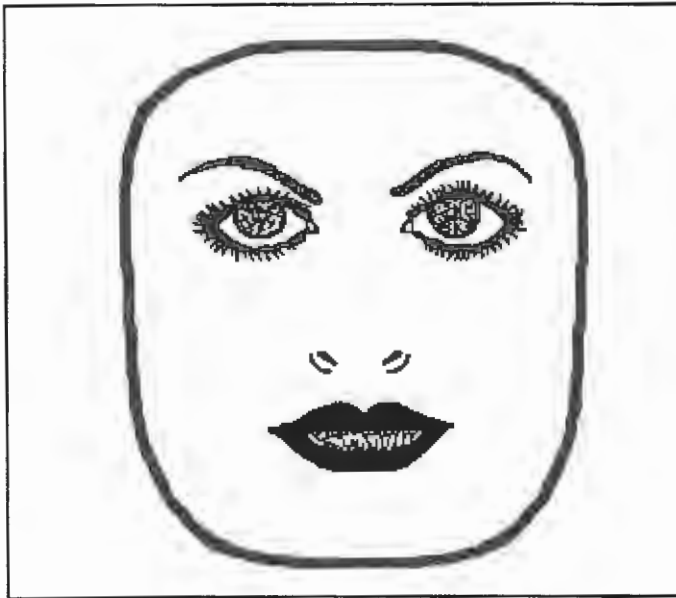


Descriptive and Identification Cues: 1,2,3,5,9,11

1. A full looking, round face with very few angles and not much height.
2. Forehead region is rounded.
3. Cheeks are full with greatest width of the face through the cheek line.
4. Chin area is rounded similar to that of forehead region.

Recommendations: 1,2,3,5,9,11

1. Aim is to lengthen and narrow facial outline.
2. Lens dimensions should have a large difference (longer horizontally) to add length to face.
3. High endpieces with pointed corners will help to add facial length.
4. Frame color should be confined to the upper brow rims if possible with the lower rims being metal or clear.
5. If possible, select a frame with a clear bridge to break the dominant horizontal line created by the upper rim. This will prevent adding unwanted width to the facial appearance.
6. Avoid round lens designs.

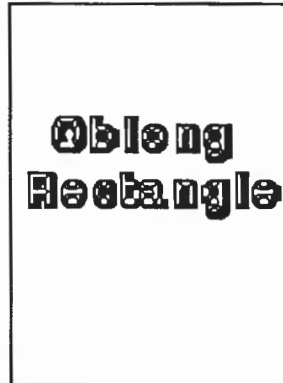
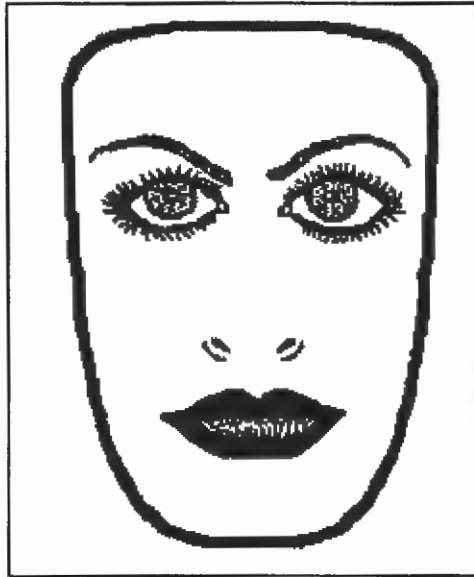


Descriptive and Identification Cues: 1,2,3,5,9,11

1. Face is about as broad as it is long.
2. Forehead, cheek and chin areas are all wide in appearance.
3. The forehead and jaw lines are about equal in width and both square in appearance.
4. Cheek line is slightly wider than both the forehead and jaw lines.
5. Jaw line is sharply squarish in appearance.

Recommendations: 1,2,3,5,9,11

1. Attempt to soften the exaggerated facial angles by playing down the squareness using rounded or curved lenses.
2. Add length to the face by using lens dimensions with a large difference (longer horizontally) or by resorting to a rimless frame.
3. Select a frame that is slightly wider than the face to make the face appear narrower.
4. Avoid any square or angular shaped designs.

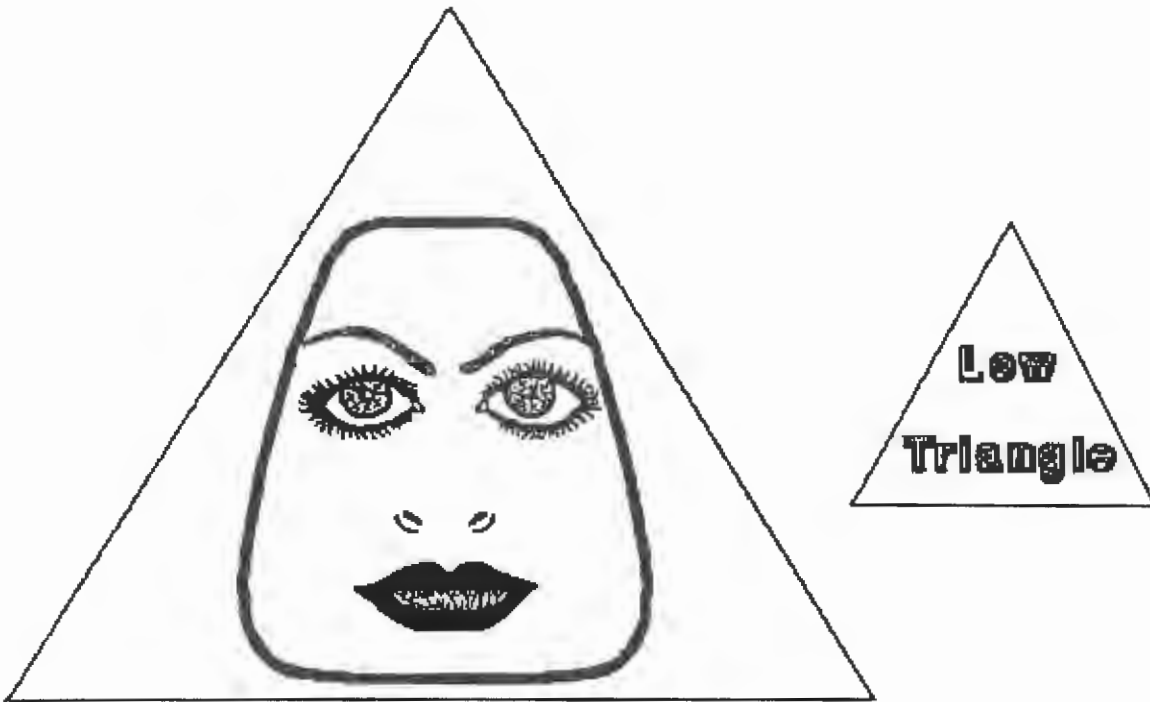


Descriptive and Identification Cues: 1,2,3,5,9,11

1. Face has a long, narrow and thin look.
2. Chin line is rectangular in nature.
3. Forehead is high.

Recommendations: 1,2,3,5,9,11

1. Major aim is to shorten the face and add width.
2. Select a lens design with a small difference in lens dimensions (nearly square and deep) to decrease length.
3. To add width to the face, select a frame with a wide and strong horizontal line.
4. Curved lens designs will help soften the rectangular appearance.
5. A dark solid color continuous throughout the frame should be utilized to breakup the long unchallenged vertical line of the face.
6. A dark lower rim color will provide an exaggerated low frame accent to help lower an observer's visual reference point as to the apparent length of the face.

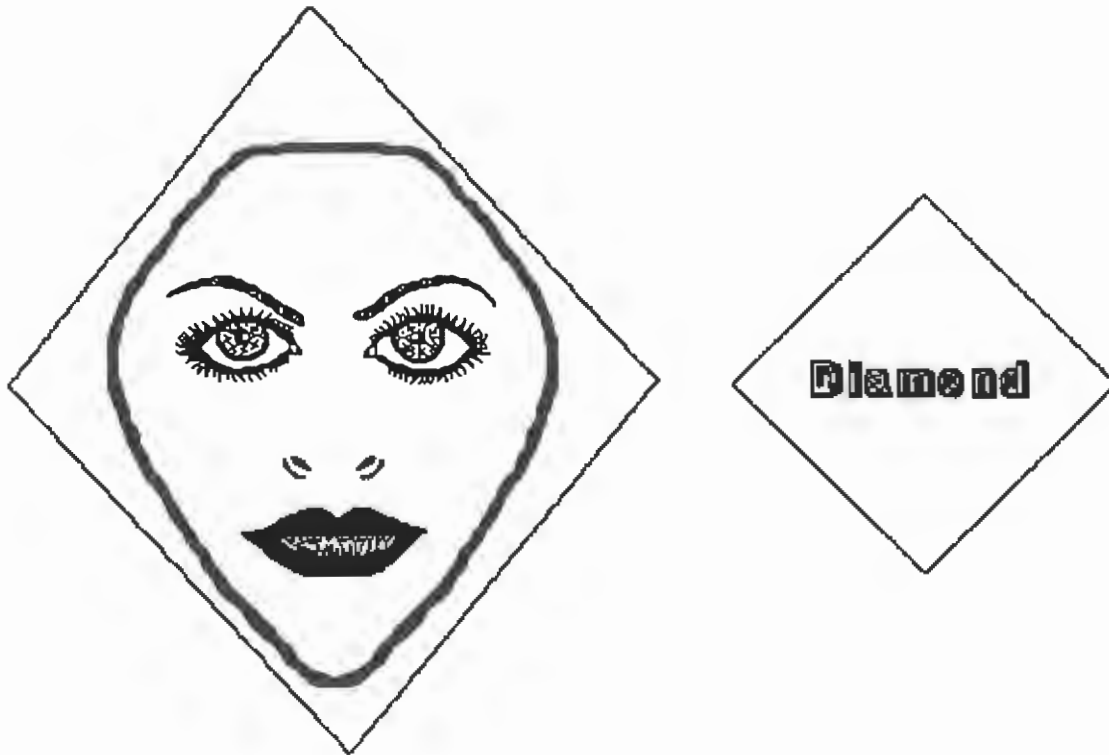


Descriptive and Identification Cues: 1,2,3,5,9,11

1. Narrow forehead with greatest width found in the lower region of the face.
2. Face gradually becomes fuller proceeding downwards toward cheek and chin regions.
3. Relatively wide jaw line.

Recommendations: 1,2,3,5,9,11

1. Major goal is to transfer visual emphasis from the lower to the upper facial region.
2. Add width to forehead region by utilizing a frame width greater than normally applied, about the same width as the jaw line. Use high endpieces to draw visual attention upward.
3. Square frames along with straight top modified aviator designs work well in accomplishing the desired appearance.
4. Wire frames that are rimless at the bottom rim will also work well.
5. Select a frame with a solid color mainly on the top line to enhance emphasis of the upper facial region and draw attention away from the bottom.
6. Avoid any lower rim that is straight and parallel to the jawline.

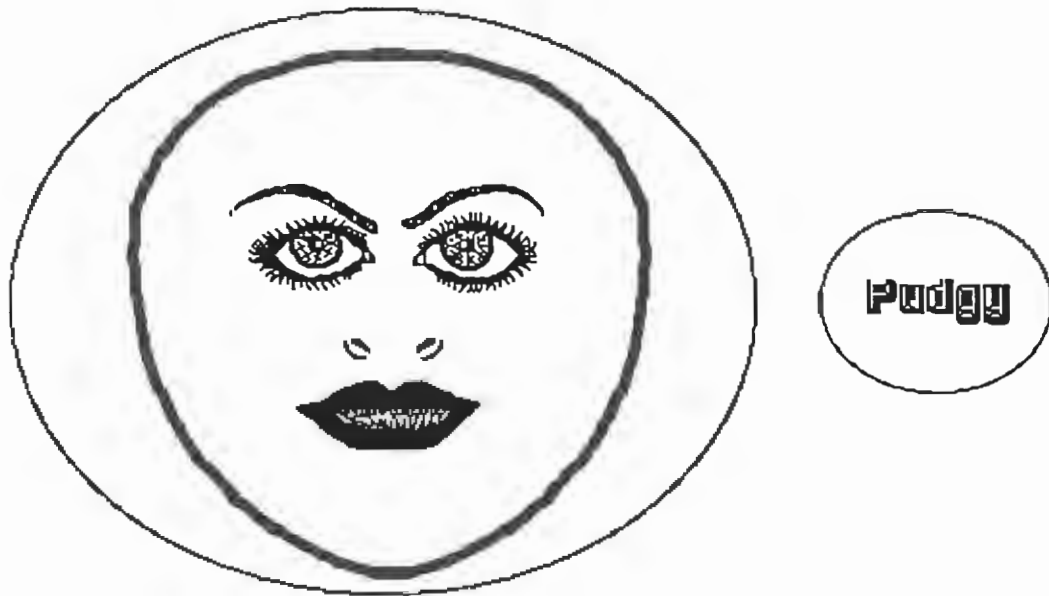


Descriptive and Identification Cues: 1,2,3,5,9,11

1. Both forehead and jawline are narrow.
2. Broad cheek line that gradually narrows to form a small chin area.

Recommendations: 1,2,3,5,9,11

1. Thought to be the most difficult facial outline to correct. Forewarning that a balance between eyewear and face will be difficult to accomplish.
2. Major goal is to broaden forehead and chin regions while minimizing temple area.
3. Butterfly lens designs work well due to their extending top and bottom edges.
4. Square or combination frames may also help improve appearance.
5. Avoid any frame whose endpieces extend over and beyond the cheek line edges.



Descriptive and Identification Cues: 1,2,3,5,9,11

1. The facial shape that doesn't really fit into any of the seven other categories.
2. The face that was formerly smaller and whose features were once in proportion but has since grown plump with added flesh.
3. Facial features have a somewhat bunched together arrangement.

Recommendations: 1,2,3,5,9,11

1. Major goal is to avoid selecting a frame that will overwhelm the already small facial features.
2. Select a frame of slender stock thickness preferably a rimless or thin metal frame.
3. A lens shape with a large difference between dimensions will help increase the apparent size of the nose and avoid overwhelming the other adjacent features.
4. Frame width not too wide and not too narrow.

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