

# The Phenomena of Optical Illusions and Its Impact on Fashion Design Trend

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Received: March 21, 2015

Accepted: June 12, 2015

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## ABSTRACT

Flattering the feminine shape is one big democratic appeal of the optic trend, and so is its sense of youthful dynamism. Optical Art is a mathematically-themed form of Abstract art, which uses repetition of simple forms and colors to create vibrating effects, moiré patterns, foreground, background confusion, an exaggerated sense of depth, and other visual effects. The art movement OP art came to international attention in the mid-1960s, an era of global social and technological change. The movement, which placed emphasis on viewer perception by exploring Optical effects like fashion design. What is so alluring about the current op moment is that designers have pushed their research as much as their aesthetics in order to cleverly contrast textures, lines, and curves. The final effect might be refreshingly minimalist, but behind the visual impact is a combination of painstakingly handcrafted techniques, high-tech fabrics, and ultra-precise tailoring. Although since the 1920s had the way people dressed changed so radically but in the mid-1960s, the convergence of music, film, fashion and social, change the mod look blasted out of London. The fashion-mod look was spread and looking forward to the future as sharp, bold, minimalist – modernist. In this present research, this movement was academically applied to fashion courses to be taught to help the local and international market for those designers create original garments, as well as those that follow established fashion trends.

**KEY WORDS:** Vibrating effects, Moiré patterns, OP art, Minimalist, Modernist,

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## 1. INTRODUCTION

The OP art movement was marked by a fascination with popular culture reflecting the affluence in post-war society. It was most prominent in American art but soon spread to Britain. In celebrating everyday objects such as soup cans, washing powder, comic strips and soda pop bottles, the movement turned the commonplace into icons.

By Movement of 1961 OP art, also known as Optical art, is a style of visual art that makes use of illusions as shown in Photo (1,2) [ Atkins.1990]. It has been trying to depict movement on a flat surface since cavemen were inspired to paint their hunting pursuits on cave walls [Parola, 1996]. In the mid 60s, the art of creating Optical movement reached its high point with the abstract style of art and graphics known as OP Art as shown in Photo(3). The term first appeared in print in "Time magazine" in October 1964 in response to show Optical Paintings at the Vasarely [Stanczak, 1970] Photo (4) though works which might now be described as "OP art" had been produced for several years previously as shown in " *Starting in Europe*", and later working its way to the US, "OP Art" is short for Optical art and was an approach that grew from the abstract expressionist movement. Artists would reduce these abstract geometric them to stimulate movement using contrasting color and shapes.

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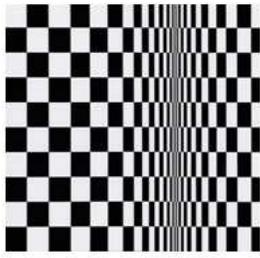


Photo (1)

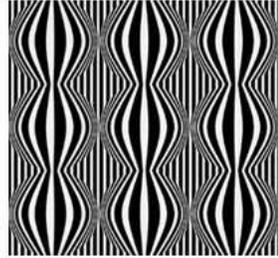


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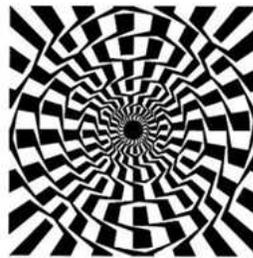


Photo (3)



Photo (4)

After a major 1965 exhibition of OP Art entitled the *"Responsive Eye"*, the public went gaga with this movement as it quickly became attached to the 60s cultures as shown in Photo(5) where the maxi dress by Asos collection - Made from a soft, lightweight woven fabric-boat neckline- Self-tie shoulder detail- fitted high waist - fluid skirt- monochrome print throughout- regular fit forms and repeat .



Photo (5)

In the "Time Magazine" first coined the phrase "Optical art" in an article appearing in October of 1964 [Borgzinner, 1964]. The term defined OP art as an art comprised of illusion, appearing to the human eye to be moving—and even breathing—due to its mathematically-based compositions of contrasting colors and forms. Although the term was coined and the exhibitions held in the mid-1960s, most people who've studied these things agree that Victor Vasarely pioneered the movement with his painting Zebra.

Through this book of 'The First POP Age', beautifully illustrated in color throughout, leading critic and historian presents an exciting new interpretation of POP art [Foster, 2011]. The work reveals how these seminal artists hold on to old forms of art while drawing on new subjects of media; how they strike an ambiguous attitude toward both high art and mass culture. Moreover; how they suggest that a height ended confusion between images and people is definitive of POP culture at large.

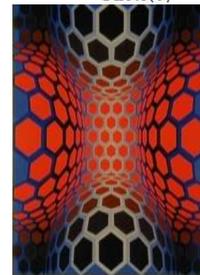


Photo(6)

In London, Paris and New York, OP and POP art was an international phenomenon promoted by the life style magazines that emerged during the decade. Artists used contrasting colors and geometric shapes that repeated in

specific compositions, to produce patterns that seemed to visually interact and be in motion as in Photo (6).

Many fashion designers began incorporating the visual language of OP Art into prints and woven fabrics. This can be seen in the use of simple, bold designs and in intricate combinations of colors and patterns that made garments seem to move by themselves. Often only black and white were used as in Photo (7), but as OP ART shows, many other color combinations were possible as demonstrated by Roojen [6,2013]OP Art in Textiles and Fashion Pepin Press.



Photo(7)

## 2. Previous work

At the Pre-Fall 2011; Temperley London - Zero + Maria Cornejo, the noteworthy print was this arrow trail which suggested a 60s Op-art Bridget Riley print [7,213] as shown in Photo (8).

Houston published book [8, 2007] to accompany the first major OP art exhibition by an American museum in twenty-five years, examines the development of the movement, its cultural context and its widespread impact on advertising, fashion and film-making. Featuring visually stunning works by such key Photoures as Josef Albers, Bridget Riley and Victor Vasarely, "Optic Nerve" offers a timely reappraisal of this highly influential movement. "Optic Nerve" is the first comprehensive survey of OP art to be published for more than thirty years featuring over 200 spectacular images, including the most significant works of this revolutionary artistic movement as shown in Photo(9).



Photo (8)

Ouchi [9, 1977] in his book showing the most ingenious and attractive modern motifs by which it was expecting some text on the design and some exciting examples but the book only contained designs.

Flattering the feminine shape is one big democratic appeal of the Optic trend, and so is its sense of youthful dynamism. “The past seasons have been so demure, buttoned-up, and ladylike, designer Saunders [2014] reset hemlines and ushered in a 1970s art-house disco vibe, modernized by diagonal color blocking and stripes made from slices of different fabrics. In spite of that, he showed dresses with curved lines, as well as sheaths with laser-cut satin “teardrops” bonded to the surface as shown in Photo (10) which is showing art as dandelion yellow dress as an art canvas.

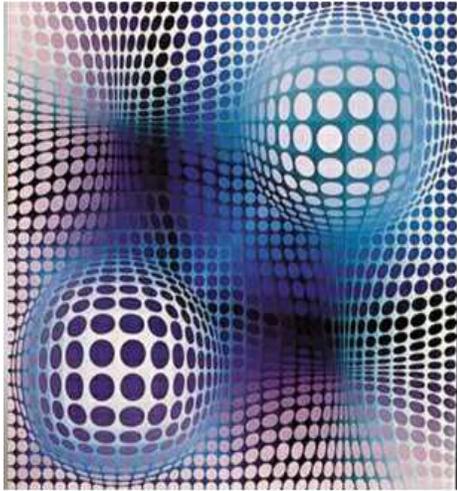


Photo (9)



Photo (10)

Op art in fashion Women's Fashions Swirling spirals, stripes and giddy checks started appearing as motifs on clothes as a way to break free from societal conventions and conservative dress codes in the 1960s.

Jacobs [2014] was by no means the only designer obsessed with graphic content. Just as the OP artists of the 1960s embraced the bold power of modernism with their mind-boggling canvases (showcased in the seminal 1965 New York exhibition “The Responsive Eye”) and made Photourative art seem old-fashioned and allegorical, but many designers turned away from the nostalgia and poetic embellishment of the recent past with one dynamic stroke.

Although Kors’s usually sedate pencil skirts and cashmere tops were packed with stripes Photo (11) but, Calvin Klein’s played with mesh and contrast-color linings to create dazzling 3-D effects. L’Wren Scott’s sheath dresses juxtaposed vertical stripes with explosive zigzags; Sportmax’s chevron-striped dresses and Moschino’s black and white piped suits made one’s eyes widen, dance up and down, and, finally, shift into a trance-like state; Sander’s curved zippered two-tone go-go boots looked like they could halt traffic—especially on a zebra crossing. Of course, this is not the first time Optical effects have jumped from gallery walls to the runways and beyond since collection of 1970 [Pierre Cardin’s 2013]. Mary Quant’s miniskirt tailoring, and how photographer William Klein brilliantly lampooned everything “modern” in *Who Are You, Polly Maggoo?* First fiction film is a daring deflation of cultural pretensions and institutions, dressed up in brilliant black and white. That era’s obsession with pattern grew out of a desire to break free from the societal conventions and conservative dress codes of the past. OP artists were criticized at the time for being all about ‘surface,’ but their work was also about color, line, and cited. Eventually, this movement has influenced choreographers which were known for these color-block costumes and set that heighten and dramatize movement. Indeed, what is so



Photo (11)

alluring about the current OP movement, where designers have pushed their research as much as their aesthetics in order to cleverly contrast textures, lines, and curves. The final effect might be refreshingly minimalist; even behind the visual impact of pattern-shoes-spring-summer [Givenchy 2010] as shown in Photo (12), as well as Brigitte Bauer has design of OP art in swimwear at Placevouliagmeni, "Greece year 1966 TECHNIQUE" as shown in Photo (13, 14).



Photo (12) OP-Art  
[Givenchy-pattern-shoes



Photo (13) OP-Art  
Tunic-style black and white



Photo (14) OP-art  
a jacket and pins

Fashion Designers Sass & Bide [13,2013] collection 2012 on OP Art Fashion shows an amazing kaleidoscope prints in the collection of Cynthia Rowley as shown in Photo (15).

Gucci [2008] will always have a decadent streak. Although Not all of Gucci glam sport ideas, Gucci heartland—the dresses came with broad belts and the occasional integral shoulder strap fastened with oversize horse bits—a house signature that a green Lurex dress held together by bows at the sides as shown in Photo(16)



Photo (15).

Photo(16)



Vintage[2012] Edge at Giambattista Valli for fall [2013] ,Under the title of "last from the past",art and design influence on2013's fashion Pleats that mixed sheer and opaque fabrics.How ever, while looking at the runway fashions for spring 2013, it seemed as if looking through an art history text book as shown in Photo(17).



Photo(17)

From Prada to Gucci everyone seems to be looking to art and design for influence. It could be said that trends feel like and look walking piece of art and it's also get ready to boogie down and get groovy because ideas of 1960's are back. Fashions of OP art are undeniably inspired from the 60's and 70's, a time of bright color and bold pattern and of course amazing art and design.

To exaggerate certain visual effects, OP artists often use simple shape primitives such as circles and lines in highly contrasting coolers such as blue and white[ Kors 2013] as shown in Photo (18),where Josef Albers, OP-art silkscreen, 1972 has called that "The Responsive Eye".



Photo (18)

As far as the OP art Nigeria Fashion Show [2013] for modest women took place at in Abuja, Nigeria's capital the MID fashion show where presented collections from labels such as Aab, Friniggi Sportswear and Vlisco.The MID fashion show, a ladies-only event, is in its third season,' event organizer Adetona Abdulhameed, CEO of MID Collections, told Aquila Style. The recently concluded third edition of the event was a landmark achievement as both foreign and domestic brands were showcased on the runway as shown in Photo (19). More collectively, OP Art respectively, in which each line direction represents a color in the underlying image. For Eco Chic trends for S/S 09; Küilerich [2009] since its launch where he focuses on environmentally friendly production and good working conditions for its workers, He has an ethical label and has split its collection into a spring and a summer line, with some subtle differences between the two. However, the spring range is characterized by cool and crisp coolers - mint and rich apple green, ice grey, taupe and lemon; with lots of floaty chiffon set off by smart black and white with a smattering of geometric OP-art style prints as shown in Photo (20).

Photo (19).



Photo(20)



(Gwyneth 2013) has designed a metallic cut-out OP art as Photo (21-right).on the other hand, as promised; that dressmaking is the architecture of movement as well as OP art movement. It was coming through with the goods on their "younger," diffusion line (Pierre Balmain 2011). The line is much more casual and down-to-earth with still a bit of that Balmain edginess. Pierre Balmain as a new and distinct brand that is inspired by the successes and history of a great house, but offers a look and product that respond to the needs and desires of today's marketplace.

As shown in Photo (21-left) (Berardi2012)., the Optical illusion lines, make them look either taller or Photo(21 smaller, the illusion-paneled gown where the model wore to the Iron Man 3 premiere as well as Kelly Rowland wore a sheer black dress on the Grammys red carpet Photo(21 right)( Rowland 2013).



### 2.1. Men's fashion OP art

Op art UK[1960 ]As indicated at Photo (22) Superfine V-neck cardigan OP art .The classic 4-5 button cardigan takes a modern direction though yarn choice. Superfine and semi opaque filament yarns are combined with tubular or sandwich trims and a formal high-break.

Photo (23), the essential gilet is updated in an elongated longer-line OP art silhouette with high stand neck rib trim with squared off front .Photo (24)

is showing an OP art shirt with tie with the same color black and white.



Photo (22)



Photo (23)



Photo (24)

### 2.2. OP art Textile

Op Art (short for Optical Art) was a prominent art movement of the 1960s that found its expression primarily in painting. Artists used contrasting colors and geometric shapes that repeated in specific compositions, to produce patterns that seemed to visually interact and be in motion. Many fashion designers began incorporating the visual language of Op Art into prints and woven fabrics[Roojen 2013]. This can be seen in the use of simple, bold designs and in intricate combinations of colours and patterns that made garments seem to move by themselves. Often only black and white were used, but as OP ART shows, many other colour combinations were possible.

CD with Designs included. Barbara Brown in particular was probably the most prolific designer of OP Art influenced furnishing fabrics as shown at photo (25) [veerland 1963-1971]. Would imbue her looks with a sense of movement with prints and appliqués resembling mid-century op-art and kineticism (he post Kinetic Potential appeared first on Part Nouveau.) [Carolina Herrera 2014]]. Looking to her native Venezuela, Herrera re-appropriated the works of Venezuelan artists Jesús Rafael Soto and Carlos Cruz-Diez, resulting in a collection filled slightly dizzying pieces, evoking optical illusions where Photo (26) is Photo (26) showing a design for her SS 2014 collection.



### 2.3. OP art rendering with line and curve

Some pieces of the fabric could be used to create the same kind of graceful architectural curves [Frank Gehry 21] and arcs renders in undulating metal, while others were shaped from below and beneath, using bustles, boning and other hidden infrastructure to create beautifully misshapen

Silhouettes as in Photo (27). Photo (26) .

Non-photorealistic rendering (NPR) [Tiffany 2013] is an area of computer graphics that studies artistic expressions for digital art. Unlike traditional computer graphics that emphasizes photorealism, NPR explores a wide variety of artistic styles including painting, sketching, and animated cartoons, and develops algorithms for recreating them.

One art form that is largely unexplored in computer graphics is Op Art. However, Short for Optical Art, Op Art is a style of abstract art associated with optical illusions that gained popularity in 1965 with an exhibition called The Responsive Eye [Seitz 1965].

It was shown that for Optical Art, [Browne 2012 22] is a style of abstract art associated with Optical illusions that gained popularity in 1965 with an exhibition as in Photo (28 a, b and c)[ Tiffany C., 2012] . Photo (28 a) Square of Two by Neal (1965) and Photo (28 b) Gavotte while Photo (28 c) is an example of curve-based OP Art; Zebra (Vasarely 1944).



Photo (27)

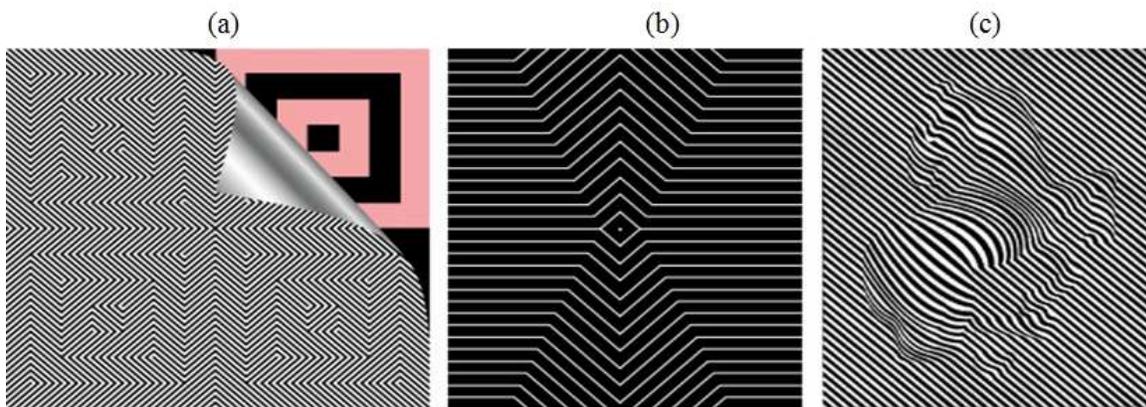


Photo (28)

#### 2.4. Optical illusion and dresses design

Optical illusion can make a dizzying visual impact through op art fashion. The alluring optic print trend is an eye-grabbing expression of geometric precision, striking design and trippy illusions as in Photo (29 and 30). In this type of dress, Photo (29) it shows a combination of Mathematics and Fashion designers use the distribution of colors, lines, patterns to make us have different looks about true measure of wearers' body [Vogue 2012]. These dresses help girls to cover defects on their body. At Photo (30) "Optical illusion

lines" the vertical lines make them look taller, whilst the Horizontal lines make them look thinner. To make your hips look bigger, small- big, dark light patterns are usually used.

By adjusting, arranging color blocks, designers can change ratio of women bodies according to what they want. In spring / summer collection of designers, we can see a lot of beautiful Optical illusion designs (spiral patterns make the body look fuller) as shown in Photo (31 and32) [Monique- Lhullier, 2014].

Photo (29)



Photo (30)



However, because ideas for every year designs are repeated after certain period of time, it is always think that Fashion is a circle. For example, the idea for optical illusion dress was in collection can use black background to fool us as Photo(29) or can make the waist look smaller as Photo(31) or as well as the chest look bigger as Photo(33)[ Viktor and Rolf 2010].

Photo (31).



*The designer used black to fool us*

Photo (32).



*Magical dress makes her waist look smaller*

Photo (33).



*Horizontal bright section makes her chest look bigger.*

The Lebanese designer's [Monique 2014] new spring collection was inspired by Victor Vasarely, who is largely considered to be the father of Op art. "Vasarely was the master at engaging textural effects, perspective, shadow, and light to create dimension within simple planes. Keeping Vasarely in mind, he created eye-popping motifs with clustered jet-black crystals on curve-hugging gowns, and incorporated

scrolling, baroque-shaped cutouts and graphic mosaic-patterned lace on cap-sleeve sheaths and jumpsuits. At spring 2014 Ready-to-Wear Murad [27] has his collection of his OP art fashion design playing on the relationship between the transparent fabrics and the color of the skin body as Photo (34).

Photo (34)



### 3-Experimental Work

The only thing consistent in fashion is change, it's therefore and most of interest to follow the new colors for spring 2014, the trends that are beginning to define the upcoming ready-to-wear season. When it comes to what shades will be on the cutting edge, the combination of black and white is proving its staying power, while icy pastels and hints of pink are getting into the mix. Photo (35) shows a fabulous a printed black and white OP art curved lines single jersey dress. The print and cut are great and the fabric is perfect for fall. Photo (36) shows black and white geometric op art dress with border black on the collar and bust dart.

Photo (37) shows a printed black and white single jersey – it's adequate to summer to fall dress. It's styled with the same print link belt. Photo (38) Op-art print dress black and white broken lines single jersey with V neck, three quarter sleeves.

Photo (39) shows a printed Black and white with a shadow of yellow OP-art jacket in nylon fabric. Also, Photo (40) shows a printed Black and white collar OP- art jacket in nylon fabric. Photo (41) shows a printed front with half collar with geometric lines of red and blue with yellow sleeves.

Photo (35)

Photo (36)

Photo (37)

Photo (38)



Photo (39)



Photo (40)



Photo (41)



#### 4-Conclusion

It's obviously and Suddenly Op Art patterns started appearing on everything from clothes to advertisements, stationery, furnishing fabrics as that useful garment.

For a few years now, with an almost punctual regularity, “OP” suggestions have been displayed on runways all over the world using lexical and ornamental elements undoubtedly inspired either to cinema or TV and events dedicated to a decade which is still leaving its mark. And yet “OP style” is not rarely only synonymous with “black & white”, with combinations and patterns whose precise and even scientific reference, only a few people would get. In the early Sixties young artists from all over the world were wondering about the phenomenon of view and future, approaching reality in a curious yet orderly way, far from conformism and from the merely pragmatic point of view of that time. Mary Quant said of this time in her biography that she wanted ‘young people to have a fashion of their own, absolutely 20th century fashion. The monochrome geometric prints of OP Art perfectly complemented the bold shapes of the mod look, which are perfectly parodied in most of the work design. The A line shift dresses by Andre Courreges and Pierre Cardin soon entered the mass market, having been quickly copied and mass reproduced specially when a large scale availability of synthetic fabrics invention with single jersey fabric has been used. As OP Art and the artists at the movement’s forefront gained recognition; the youth culture explosion of the sixties was gaining momentum up to the recent years. The mod style, which was already waning in the U.K., reached the other side of the Atlantic at around the same time as the 1965 exhibition, just in turn, the responsive Eye in New York, which showcased the work of Bridget Riley and Vasarely. The most iconic example of art meeting fashion in the 1960s is dress. However, not to be confused with OP Art; It explores many fundamental artistic and scientific concepts, from geometric shapes and perspectives to color theory and the psychology of visual perception, geometric styles were usually made up of panels of fabric in boldly contrasting colors such as black and white or bright primary colors.

#### REFERENCES

- [1] R. Atkins, Art speak ISBN 978-1-55859-127-1
- [2] R. Parola . Optical Art Theory and Practice Dover Publications Inc. New edition (1 de September de 1996) ISBN-10: 0486290549
- [3]“available online: [http://www.rogallery.com/Vasarely\\_Victor/vvassehm.htm](http://www.rogallery.com/Vasarely_Victor/vvassehm.htm).
- [4] Jon Borgzinner. "OP Art", Time Magazine, October 23, 1964
- [5] Hal Foster. The First POP Age: Publisher: Princeton University Press (October 24, 2011) ISBN-10: 0691151385, ISBN-13: 978-069115138.

- [6] Pepin van Roojen OP Art in Textiles and Fashion Pepin Press; Pap/Cdr edition (30 April 2013)  
ISBN-13: 978-9460090073
- [7] Pre-Fall 2011: Temperley London - Zero + Maria Cornejo.
- [8] J.Houston Optic Nerve: Perceptual Art of the 1960s Hardcover – Merrell Publishers (March 1, 2007)  
March 1, 2007 ISBN-10: 1858943892
- [9] Hajime Ouchi Japanese Optical and Geometrical Art Dover Publications (June 1, 1977) ISBN-  
10: 048623553x.
- [10]“availableonline:<http://fashion.telegraph.co.uk/news-features/TMG9915381/The-style-equation-fashion-designers->
- [11]“available online: <http://nymag.com/thecut/fashion/designers/michael-kors/>
- [12] “available online: <http://www.wmagazine.com/fashion/2013/01/OP-art-inspired-fashion-on-female-models>.
- [13] January 1, 2013 12:00 AM | by W magazine Photography by Roe. Ethridge. Styled by Giovanna Battaglia .January 2013
- [14]“available online: <http://www.style.com/fashionshows/complete/slideshow/S2008RTW-GUCCI/#10>
- [15]“available online: [http://www.nytimes.com/2013/10/10/fashion/looking-beyond-the-clothes.html?\\_r=0](http://www.nytimes.com/2013/10/10/fashion/looking-beyond-the-clothes.html?_r=0)
- [16]“available online: <http://whitecubediaries.wordpress.com/blast-from-the-past-art-and-design-influence-on-2013s-fashion/>
- [17] “available online: [http://www.aquila-style.com/fashionbeauty/nigeria-fashion-show/Nigeria Fashion Show Features Modest Wear Labels](http://www.aquila-style.com/fashionbeauty/nigeria-fashion-show/Nigeria-Fashion-Show-Features-Modest-Wear-Labels)
- [18]“available online: <http://www.hippysshopper.com/2009/02/2.html>
- [19] “available online: ELLE.com
- [20]“availableonline:[http://partnouveau.com/?p=2195&utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=kinetic-potential](http://partnouveau.com/?p=2195&utm_source=rss&utm_medium=rss&utm_campaign=kinetic-potential) .
- [21] “available online: [www.pinterest.com](http://www.pinterest.com)
- [22]Los angeles Times -New York Fashion Week Fall 2012: Thom Browne's Tim Burton moment  
February 15/10/2012:
- [23] C .Tiffany. Inglis (Advisor: Craig S. Kaplan) Op Art rendering with lines and curves. University of Waterloo.
- [24]“available online: <http://sunny-love-vogue.blogspot.com/2012/01/fashion-design-and-mathematics-optical.html#!/2012/01/>
- [25]“available online: <http://www.style.com/fashionshows/review/S2014RTW-ZMURAD>
- [26]“available online: <http://www.style.com/fashionshows/designerdirectory/MONIQUE/seasons/>
- [27]“available online: <http://www.OP-art.co.uk/OP-art-fashion>.