FOLDED PAPER MULTIPLIES THE RESULT.

THE THREE-DIMENSIONAL POTENTIAL OF PAPER IN GRAPHIC DESIGN

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In a TED talk on the power of visual illusions, neuroscientist Al Seckel explores the illusions of perception that trick our minds. Through a series of visual tricks he proves not only that we are easily tricked, but also that, somehow, we like it. And he discovers one of the keys of the existence of films, magic tricks, or shows that make us happy: all of them have something that breaks beyond our expectations and that unexpected turn takes place, in all of them, in an agreeable way. It is not what, as an audience, we expect, but there is something happy about it.
<https://www.ted.com/talks/al_seckel_says_ our_brains_are_mis_wired>(31.03.1015)

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DESIGNERS UNIVERSE: *The Wow Factor*, Berkeley, Gingko Press Inc., 2011.

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Donald Norman in his book *Emotional Design* discovers for us how "we tend to establish links with things and objects when they have a significant, personal association, when they remind us pleasant, comforting moments." This is to say, if a graphic piece has made us feel well, or has invited us to discover some trick, we will somehow feel linked to it in a positive manner, since "one of the most convincing ways to induce a positive feeling of identification is the personal feeling of having accomplished something, having made something."
NORMAN, DONALD A.: *El diseño emocional*, Madrid, Paidós, 2011, p.64, p.72.

Paper is the base of our creations. It is the most accessible raw material to play, draw and write. It has also been the main tool for graphic communication up until not so long ago. The simplest mechanisms of the origami technique captivate creative people, designers, architects, artists and of course any child, at the same time they synthesize mathematical plots, descriptive geometry and technical drawing. This combination of disciplines, processes and techniques are the key to success for many graphic pieces, their folding and interactivity providing full meaning and conveying ideas.

Key words:
Paper, fold, interactivity, play, surprise

Designs that engage and strategies of persuasion

For an element of communication to work, its most important feature is the capacity to engage us, call our attention, and there are many ways of achieving this. Children are always exercising their curiosity and their capacity for amazement, but these qualities are difficult for us adults to exert. However, when we find an object or text that awakens our curiosity and that, besides, can surprise us, we feel immense gratitude because it has made us experience a certain degree of happiness and satisfaction.

One of the most interesting aspects of the designs that manage to fix themselves in our memory is their capacity to transform us from spectators to active participants. That is, making us exert ourselves in some way to decipher the message. In this manner it becomes a significant experience that, in some way, transcends beyond the moment we devote to the design, converting it into a pleasant memory. Scientific studies on perception show that

as spectators we are not only gullible, but in some way we like it. We like surprising twists that disrupt our expectations[1]. Thus, those elements of graphic communication that have a twist in their discourse, that try to hoodwink us in a pleasant way and besides make us exert ourselves in discovering it, will make us feel happy and satisfied.

It is what we call the surprise factor (The Wow Factor[2]) or the capacity of surprising that guarantees that a poster or leaflet work in the sense of making it memorable. An appealing graphic element to attract the eye, that makes us ask ourselves as spectators, "Where is the gimmick?", inevitably makes us fall in its net. An unexpected format, a combination of textures or the combination of materials can make the project exceptional in its effectiveness in capturing the public's attention and awakening its imagination. There seems to be no limit to the tactics that can be used to generate surprise and seduce the spectator, but what has been demonstrated is that interaction with the user always engages. This can affect only sight and intellect, for example, with a riddle, or it can be a physical interaction, with the design of pieces that must be touched to function, for them to make sense, for example, through pop-up elements.

Donald Norman[3] has centered his research in discovering why some designs are more effective than others and defends the stance that if a piece has made us feel good, or has invited us to discover a trick, we will feel undoubtedly linked to it in a positive manner. Therefore, if we are able to make them look at our card, invitation or leaflet, and see it as an object, we will already have a partial victory: the spectators unconsciously will have assigned it a value. And if besides, they see it as an object that is "keepable"or collectible, we will have surpassed the initial purpose of fleeting communications and our message will probably be remembered

for some time. They will have bestowed it with a second meaning, one which concerns them only: a memento to treasure.

When the person to whom the message is meant, the receiver, becomes an active participant in the design, they feel that what happens occurs to them directly and feel implicated in the working of the piece and the communication will reach them with more intensity. How many times have we kept a card, a post card or a small promotional object that has amused us with the sole intention of being able to share it with our friends or family? We want to grant them a moment of curiosity and satisfaction, a brief moment of happiness, a different and significant experience.

Lately, graphic design has gone from being basically an static media to being ever more dynamic due to the interactivity of digital communication that the computer, tablets or mobile phones afford. We are saturated by electronic media and are grateful for a moment of digital respite, but we soon miss the interactivity. That is why designs that have a component of participation on a traditionally static media capture our interest and have great probability of delivering their message successfully.

Therefore, nostalgia for something physical is another persuasive tool directly related to the use of paper. Trends are rediscovered periodically and now we are in a moment of boom for handmade things, DIY, paper, cardboard, re-cycling. The new generations are attracted to retro-styles. The digital revolution has created a yearning for handmade things. Surrounded by such sophisticated technology, we appreciate the analogue technologies' simplicity and are pleasantly surprised by the proposals interested in promoting what is handmade and even imperfect, what is analogically processed. The communication pieces or objects we design are destined to a public in whom we wish to produce emotions and the interactivity and participation through paper achieve it.

Often, the simplest mechanisms of interactivity result surprisingly effective. For example, the objects we build ourselves adopt a personal meaning. We all feel satisfaction in creating objects with our own hands. Many designers use this mechanism to achieve satisfaction to secure the attention of the receiver. Not only fleeting attention; it is probable that this piece will not end up in the paper bin since we all feel immediate attachment to that which we have helped build. Just as we feel that the piece we have created is unique, personal and non-transferable.

Games have been used countless times and circumstances, as the strategy to deliver a message. It has been amply demonstrated that it works both in children as in adults. When we speak of visual experiences, such as graphic design, what is significant to one person might not be to another, es-

pecially if the message has a large target audience. However, those experiences which have a fun part are probably more universal because we all like to play. We have been living, for some time, an escalation of gaming[4] techniques destined for adults and applicable in a great number of situations, especially in advertising campaigns. Gaining loyalty implies that the user in a commercial campaign is the essential purpose of a communication piece, and if it works as a game it seems to assure us a portion of success in a large public.

For a communication piece to function successfully as a game, certain key points must be considered. It must constitute a challenge and be able to cause feelings of tension and happiness when it is resolved. It must also be of undefined character having results that vary constantly, introducing a pleasant confusion that can serve to captivate everyone. It must also have some type of limitations or rules. It must be, at the same time gratuitous, unselfish and unimportant so as to seem a game, but this requirement cannot be fully met since graphic design must transmit a message that will never be unselfish (if we are speaking of advertising campaigns). It is also important that it be perceived as free and voluntary, that no one is obliged to participate.

If we offer pieces that make spectators stop and decipher them, partly with a challenge, and force the spectator to decipher the visual codes, we will cause surprise and pride. Understanding some of the challenges may require a sharp mind. Play is universal, people of all cultures have always played, to liberate tension, relax stress and as an aim in itself.

The traditional pastimes are an inexhaustible vein of ideas to communicate a message. They make the receptor feel special when he manages to solve them. They are known challenges, the ones we have all played, and for this reason do not require instructions. We are speaking of crosswords, labyrinths, hieroglyphs, join the dots, etc. Also, the simplest mechanisms used in construction games are easily transferred to graphic pieces. The receptor will see his construction not only as an object, but as something of his own, creating a special bond. Magic tricks are able to manipulate the perception of the spectator and we can apply the basis of certain design tricks getting the attention of the receptor.

Since the traditional base of graphic design is paper, origami has been used an infinite number of times as a resource and source of ideas for its manipulation. We associate any folded paper figure to childhood and play[5]. But the use of folds in graphic design is not always a superficial element and has more to do with the part of materials and finishes and can function as a supporting element to consider from the earliest phase of the design. Designing from a "folding" mind set opens a world of possibilities. We can even express ideas through paper.

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Extract from the definition of gamification in Wikipedia: Gamification is the application of Gamification is the application of game-design elements and game principles in non-game contexts. Gamification commonly employs game design elements which are used in so called non-game contexts in attempts to transform an activity that would be boring a priori into another one that would motivate the person to participate, it would be like awarding stars for certain accomplishments throughout the activity. If introducing values from the realm of play is not a new idea, it is a concept that has been magnified in the last few years, due to the expansion of the digital sphere, and those of videogames and their applied studies. Gamification pretends to persuade the user to transform a simple task into an attractive challenge that would make it worthwile to continue. In the specific case of Marketing and the business world, gamification is redefined as a set of techniques that offer the client a pleasant, fun experience so they get involved in the business activity, to consume more, establish their loyalty, and finally, to get them to respond better to the commercial stimuli. <https://es.wikipedia.org/wiki/Ludificación>(03.01.1016)

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In the book *100 ideas que cambiaron el diseño gráfico*, the authors propose that child play and graphic design go hand in hand. Origami provokes gut reactions in the receiver, while their common denominator is lightness and lack of formality. Paper cutting and origami suggest youth, or at least, play". HELLER, STEVEN; VIENNE, VÉRONIQUE: *100 Ideas que cambiaron el diseño gráfico*, Barcelona, Blume, 2012.

Paper Faces, Swatch Book Torraspapel. Héctor Sos for Estudio Rosa Lázaro. Photograph: Xabier Mendiola.

Folded paper as a communication strategy

The simplest folds and mechanisms done on paper have an amazing effectiveness on the receptor. Perhaps is because it is a media accessible to all and any simple manipulation can make us imagine we could ourselves have thought of it. As we have seen previously, we have assumed that origami and folding paper as a game, and as such, captures our interest immediately.

Folded paper multiplies the result of the communication because the user looks at the design once more, because they show it to their friends and they comment it with their family. It also multiplies the result because the grateful users will attend to the next communication of the firm, will want to play again and therefore a link is created between the client and the brand. The use of folds in paper is a practice with a long history, it is a resource which has survived despite the appeal of other media, and it will last in time. The graphic creations in which these techniques are used are many and significant. Before their application in graphic pieces as a means of transmitting a message, the origami technique was developed during centuries as entertainment. In the 1920s the Bauhaus established the fundaments and patterns that we now know as industrial and graphic design. It is significant to find examples of teaching exercises carried out by the teachers of the school that used paper folding techniques. In Josef Albers' preliminary course, the

first day the teacher proposed to his students an exercise with paper. He asked them to make the most of the material, investigating about its possibilities. The most natural and spontaneous results were the ones which received the best critique, transmitting to his students that most of the time, the simplest solutions were the most effective.[6]

But, can folds be used to express ideas or are they always a mechanism that enhances the idea already expressed through the text or the images?

The Authors' Club campaign designed by Sublima Communication in 2009 did not use printed images to transmit its message. A completely white poster with the text "Blank pages in search of an author" invited spectators to participate in the activities of the club. A white poster always gets attention because our sight is accustomed to full colour posters with a lot of information, or at least an image, but the key to highlight in this example is that with the same idea to transmit, this campaign works better thanks to the use of folded paper. It could not be simpler, two cuts in the shape of "C" facing each other conform two pages of a book that separates from the wall, approaching the spectator, allowing him to interact and produces a smile. All of this, and the added value that the die-cut figure corresponds to the association's brand. Everyone who has discovered this club through the poster we are speaking of remembers it every time he sees the logo. The effect of a blank book could have been achieved with a plain poster, through an illustration or photograph, but it would not have had the same impact on the spectator. Therefore, the use of folded paper has contributed to transmitting the idea pretended.

Paper is in itself a means of communication with characteristics that cannot be transferred to digital media. If we try to profit from this material and highlight the importance of the tactile experience, we will be able to stimulate the other senses of the receiver.

One of the charms of working with paper is that the physical relationship of the designer with the object is recovered. It is not enough to elaborate it on screen, it must be tested in the study, it must be built and more important, it is necessary to become implicated in the industrial process, that is, talking with the printers, carefully choosing the paper, talking with the workers that are going to manipulate it. The participation of the designer in the production process is evidenced in these designs, which contributes to making them, most of the time, more attractive. The designers' experimentation itself with new formats conduces to discovering their potential. Solutions that are not viable in a project, might be more suitable for others. It is necessary to reconsider and rethink concepts. Exploring opens new avenues of thought and makes us better designers. The process is slower when you abandon what is established. We might encounter many restrictions, specially eco-

FIEDLER, JEANINE & FEIERABEND, PETER (ED.): *Bauhaus*, Colonia, Könemann, 2000, p. 374-375.

nomic ones, when tackling a new project that might make us discard folded paper as an option.

Today there are many publications on folding techniques that have contributed to popularising this type of designs among the creative community and where we can find direct solutions and even better, inspiration for our projects. Seeking resources outside the traditional industry (materials and techniques of other fields) can also contribute solutions outside of what is established of which we should learn to take advantage of.

Paper is, doubtlessly, the first support for any illustrator. However, illustrating with paper constitutes a resource suitable for those creators that transform this base into the main ingredient with which to realize their work. To be able to escape the plane, breaking the two-dimensional rules is a yearning of these creative minds that manage to reach the spectator in an almost physical manner.

The creative process of these three-dimensional illustrations require, in most cases, building models, creating a paper world, a scenario that later will be reproduced in the posters, flyers, etc., through photographs. Also there are many illustrators that use these digital means, software for creating 3D graphics which manage to imitate materiality. However, those who resist and prefer the physical media, constructing it with their own hands, manage to transmit warmth and a sensation of traditional play that is seldom well recreated with digital means. It is what is called tactile design, that is, that the images reproduced provoke in the spectator the desire to touch them, to manipulate them.

As in traditional illustration, the designer decides the frame, what is shown and what is not. In the case of work that requires a single illustration, such as a poster, in most cases dioramas are designed to be photographed from a specific point. However, many designers profit from the third dimension to create complete campaigns, producing posters and animations from the same model for advertising campaigns.

The process of reading the folded pieces differs greatly from "flat" communications. When the receiver finds himself before a piece of this type he uses more senses than in a conventional reading and this produces in him immediate interest. However, it is necessary to find a balance between the visual content and the structure to be able to maintain this initial interest and manage to deliver the message correctly.

The importance of its usability is evidenced by the fact that the design works or, at least, that it works for most people. We are speaking of designs that imply interaction, that are invitations to interact and that the pieces do not work without the participation of the user. Thus we must try and try again. Testing the design ourselves, building models and letting more or less assorted public try them. It must be verified that it works for our target public. confirm that they will know how to use it and assure that the sensation obtained when playing with our design is the one we pretended. And of course, valuing unexpected results. We must not forget that most of the time we are pursuing a commercial aim and that we need the client to feel safe and that the design will be understood by its target public.

Even if the pop-up elements are widely extended, they always surprise us. We are accustomed to seeing them in publications destined to children and thus what we least expect in an information leaflet destined for adults is it taking on volume and having movement. Present designers, ever more, dabble in different disciplines and in most cases develop a multidisciplinary career that contributes more open points of view when approaching any design problem. In fact, one of the basis for developing creativity is seeking inspiration in fields completely foreign to the discipline we work in. However, it is also important to review our own discipline from a different stance; to review the things we normally do or the materials we use, that is, giving a turn of the screw to what we already know can bring us to solutions that are completely surprising and innovative.

Therefore, if we understand the use of paper as an opportunity, as a creative avenue to develop the design of the graphic piece, we will discover that amazing results can be achieved exploiting the possibilities of the format, the texture and finally, gleaning maximum advantages of the properties and capacities the material has to offer. Before a society having so many visual stimuli available, a simple fold in paper still captivates us, it charms us.

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María Blasco Arnandis. The mix of disciplines, processes and techniques (architecture, graphic design, illustration, engraving, *collage*) make up María Blasco Arnandis' trajectory. A great part of her projects develop around paper, exploring the possibilities of folding and manipulation offer. She always seeks a knowing smile in her audience with their participation and implication in deciphering the message.
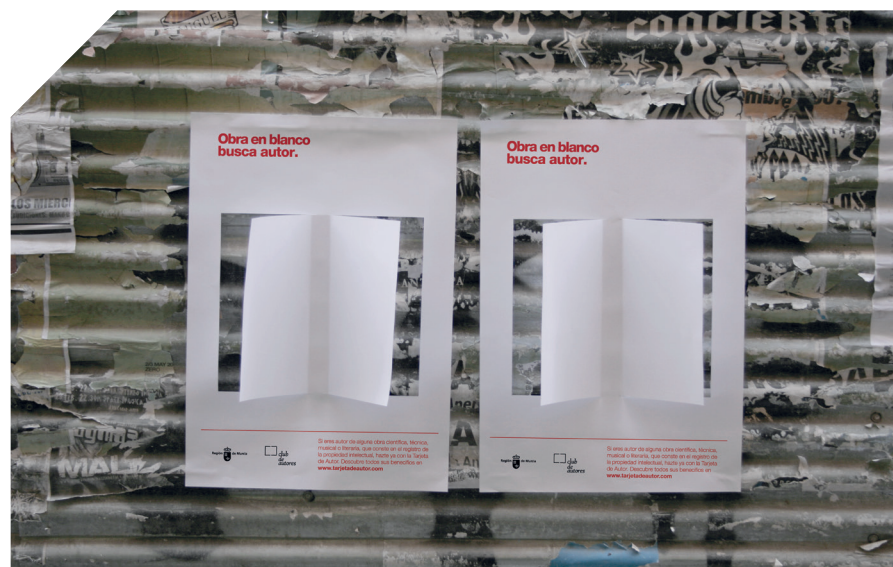
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