Subjects and Styles in Instagram Photography (Part 1)

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"Every age has its own gait, glance and gesture." "By 'modernity' I mean the ephemeral, the fugitive, the contingent, the half of art which other half is the eternal and the immutable."
Charles Baudelaire, *The Painter of Modern Life*, 1860.

"If you see an image you have ever seen before, don't click the shutter."
"The best way to achieve surprise quality is by avoiding clichés."
Alexey Brodovitch's advices to young photographers. (Brodovitch was Art Director of *Harper's Bazaar* from 1934 to 1958.)

"We navigate the social and the physical world on the basis of aesthetic values…this is an inescapable fact of our human condition… We as designers have to engage with this fact of life."
Patrick Schumacher, Facebook comment, 01/13/2016.

Figure 1.
Color prints and slides from 1956-1976. Millions of such images were captured with mass market point and shoot cameras and Polaroid cameras. In the former case, the film cartridges were developed by photo labs using standard equipment made by companies such Kodak. Depending on the film type used, the labs returned to consumers prints or slides. The images are arranged chronologically left to right and top down. All images were scaled to the same height. Keep in mind that that colors frequently faded over time; early digital scanners used to digitize these photos could have also changed colors, contrast, and lose details.

Sources:
http://look-at-me.tumblr.com/ (a Tumblr with user submitted vintage personal photos).
https://www.flickr.com (only photos with Creative License are used).

The "Instant" revolutions in photography

What do people share on Instagram? And why Instagram is a perfect platform to study popular photography around the world today? Most discussions of Instagram in popular media cover only narrow cases: selfies, celebrities, Instagram "stars," fashion bloggers. As photo historian Alise Tifentale notes, "Sometimes claims are made based on outstanding exceptions that catch people's attention, go viral, and easily become a symbol of the whole phenomenon. Yet such symbolic images are not necessarily representative of larger trends." Instead, they often are "highly untypical exceptions that overshadow masses of more 'ordinary' images." (Alise Tifentale, Art of the Masses: From Kodak Brownie to Instagram, 2015).

Generalizing the results of a number of our large scale qualitative studies that looked at over *fifteen millions Instagram images* shared during 2012-2015 in sixteen global cities, and taking into account findings from a number of studies from other labs, we believe that at least during that period the majority of Instagram publically shared images show moments in the "ordinary" lives of hundreds of millions of people using the network globally (see **Figure 4**) - as opposed to be coming from celebrities, Instagram stars, or companies. (While the proportion of such specialized images and accounts is tiny, they get disproportional numbers of followers and likes. See analysis of 1,265,080 images and videos from 256,398 users shared in February and March, 2014, in Camila Souza Araujo et al., It is not just a picture: Revealing some user practices in Instagram, 2014). Thus, Martin Hart's earlier description of social network photography as "the visual publicization of ordinary life in a ubiquitous photograph" is appropriate for characterizing the larger part of Instagram photography in 2012-2015 (Martin Hart, *Ubiquitous photography*, 2012).

This does not mean that people share the photographs of the same subjects and that they use the same styles and techniques in every city around the world. This also does not mean that they all understand and use Instagram medium similarly. Our Instagram analysis suggests that the subjects and styles of photographs are strongly influenced by social, cultural, and aesthetic values of a given location or demographic. **Figure 4** shows small random samples of Instagram images shared in Bangkok, Berlin, Moscow, New York, Sao Paolo and Tokyo during one week in December 2013. Even comparing these very small samples we can already notice local differences. (We have submitted a paper for publication where we present qualitative analysis of differences in subjects, techniques and styles of photos from these cities using a much large image samples). In another example, when we analyzed 3,840 single selfies shared on Instagram in these cities (and also in London) using face analysis software, we found significant differences in how people pose (see selfiecity.net and selfiecity.net/London projects).

The exact content of the "ordinary" can change from place from place, from one demographic group to another, from one subculture to the text. Moreover, while in big international megacities cities like New York, London and Moscow Instagram was used quite widely in 2012-2015 by the locals and by tourists, it is likely that during this period in other world locations it was only used by small groups such as members of culture industry and English speaking young elites. (See Boy and Uitermark, Capture and share the city: Mapping Instagram's uneven geography in Amsterdam, 2015. Their analysis of 400,00 geotagged Instagram photos shared over 12 weeks in 2015 suggests that even in Amsterdam the platform was used most actively by groups the authors call "vanguard of partying cultural producers," "vanguard of lifestyle promoters," and "city image makers".)

Such differences are very important for any arguments about Instagram photography, or any other social media content. Thus, when we say that "the majority of Instagram images show moments in the 'ordinary" lives'" of the larger proportion of the platform users, this does not necessary applies to all users in every location in the world.

This majority can be dominated by people living or visiting only some among 175 countries where Instagram was used by 2016. (The numbers showing proportions of Instagram users and images that come from each of these countries so far were not published.) So keep this in mind when you read the rest of this part of this text. Our statements are based on the analysis of large image and data samples from 16 world cities (each with population over 1 million) we worked on over four years, plus informal browsing of many Instagram accounts – but we can't say anything as definite about numerous of other locations worldwide.

The "ordinary" moments being captured by Instagram users may be important for people to share with their friends (interesting trips, meetings with friends, family events, etc.) - or they can be only of interest only to the author, and therefore look "ordinary" to us because we are not involved in her/his life. And while the use of Instagram by companies and for commercial purposes has been systematically growing, in our study period only a small proportion of Instagram images belongs to domain that that Jonathan Schroeder calls "strategic imagery" – "images intended to persuade, promote, or otherwise perform strategic intentions" (Jonathan Schroeder, [Snapshot Aesthetics and the Strategic Imagination](), 2013). However, this is not immediately obvious.

If we research Instagram by focusing on particular popular users or searching for particular hashtags (#photooftheday, #selfie, #kardashian, #fashion_week, etc.) we will only see particular subjects. While a number of computer scientists have published results of the automatic analysis of large Instagram samples, most often their samples are constructed without considering locations were images were shared, and therefore they hide geographic differences. In our lab, we adopted a different strategy to study large-scale trends in Instagram images while taking into account such differences. This strategy is to download and analyzing *all* Instagram images shared by all users in particular areas during periods of time. The datasets we collected in this way include 2.3 million images shared in 13 global cities during spring 2012; 650,000 images from one week in December 2013 in Bangkok, Berlin, Moscow, New York, London, Sao Paolo, and Tokyo; close to 1 million images from spring of 2014 in Kiev and Taipei; 152,000 images from the center of London during one week in September 2015; and 10.5 million images shared in New York City during five months in 2014. You can find the analysis of these datasets and visualizations that show tens of thousands of Instagram images together at [http://phototrails.net/]() (2013), [http://www.the-everyday.net/]() (2014), [http://on-broadway.nyc/]() (2014), [http://selfiecity.net/]() (2014), and [http://selfiecity.net/london/]() (2015). We have been also working on the analysis of 265 million tweets with images with geolocations shared publically worldwide during 2011-2014. See **Figures 2** and **3** for examples of the visualizations and applications created in these projects.
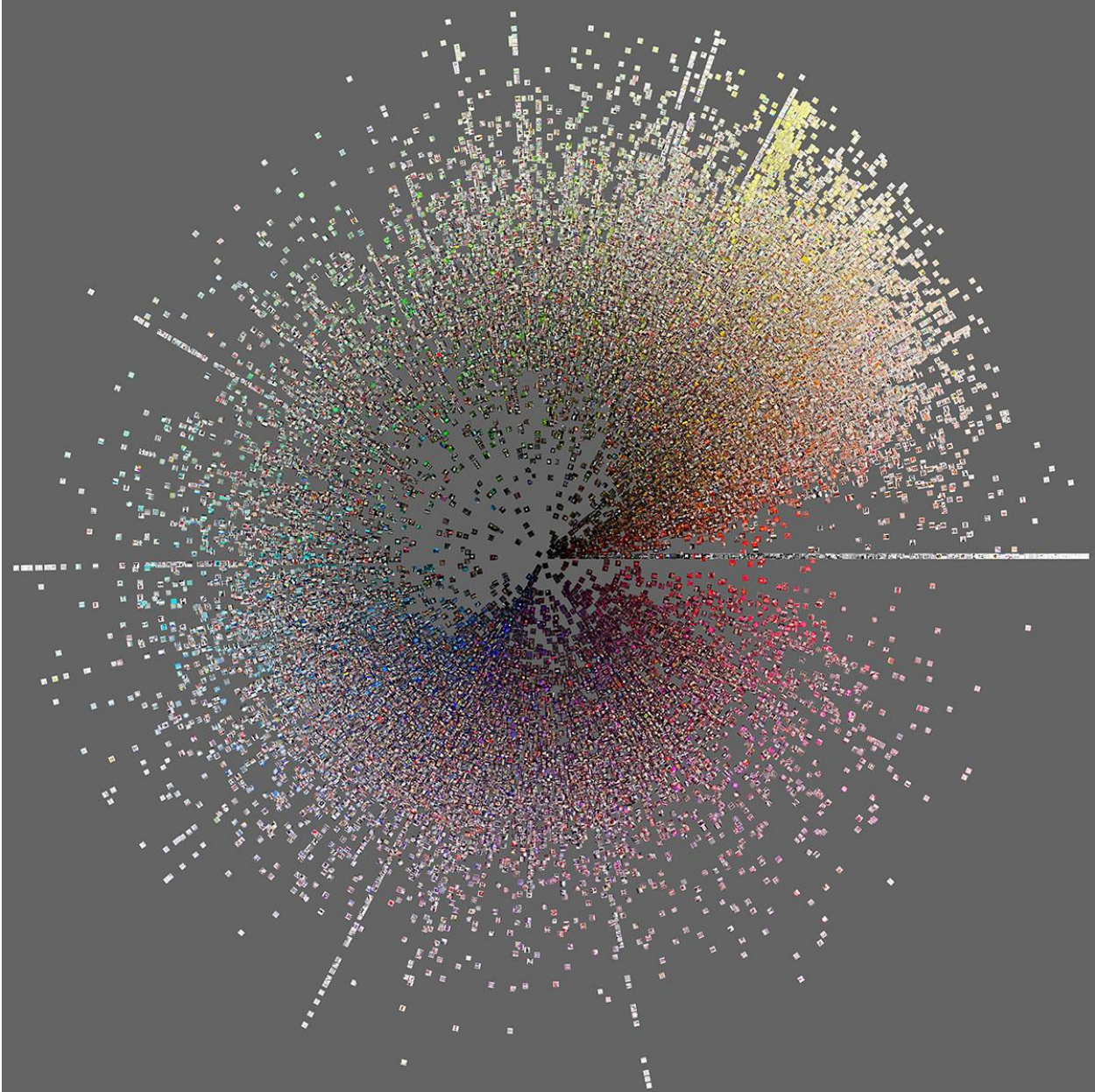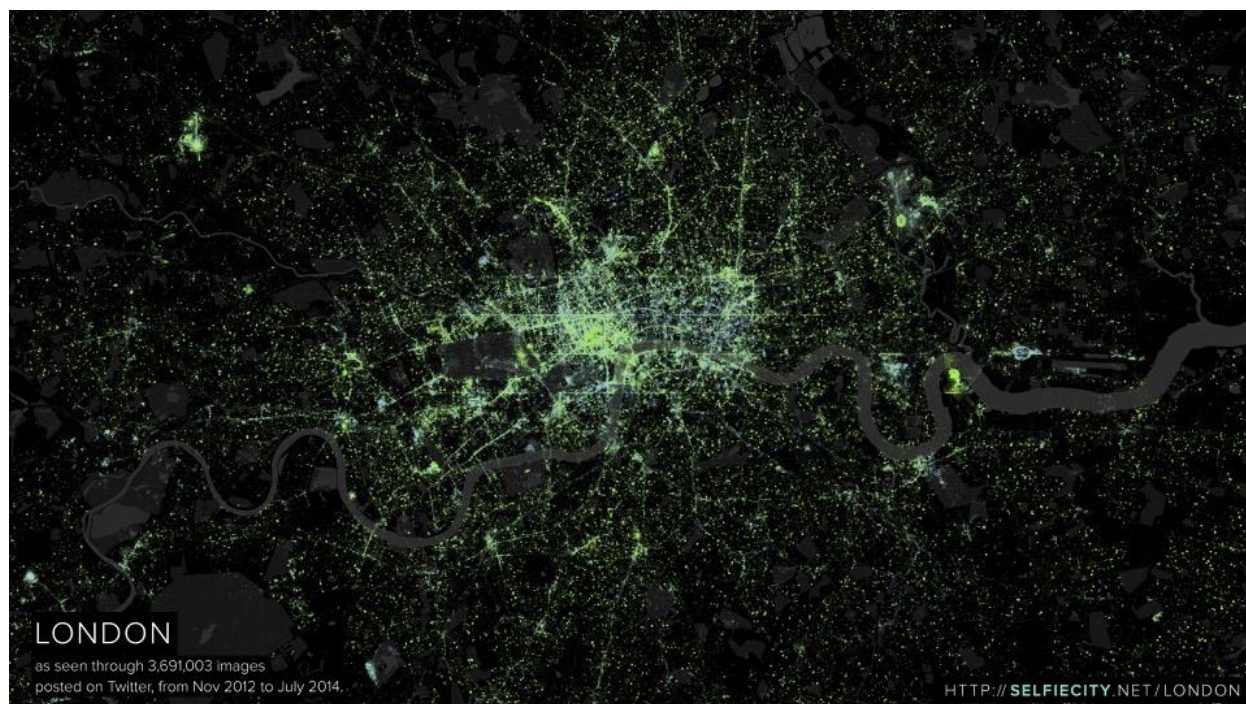
Figure 2.
Our phototrails.net project that compared 2.3 million Instagram images from 13 global cities. Project team: Nadav Hochman, Lev Manovich, Jay Chow. This visualization compares 50,000 images shared in center of Bangkok (left) and 50,000 images shared in the center of Tokyo (right). Images were shared in Spring 2012. In the visualization they are organized by average brightness (distance to center) and average hue (angle). The high resolution versions are available here: https://www.flickr.com/photos/culturevis/8628507293/sizes/c/.
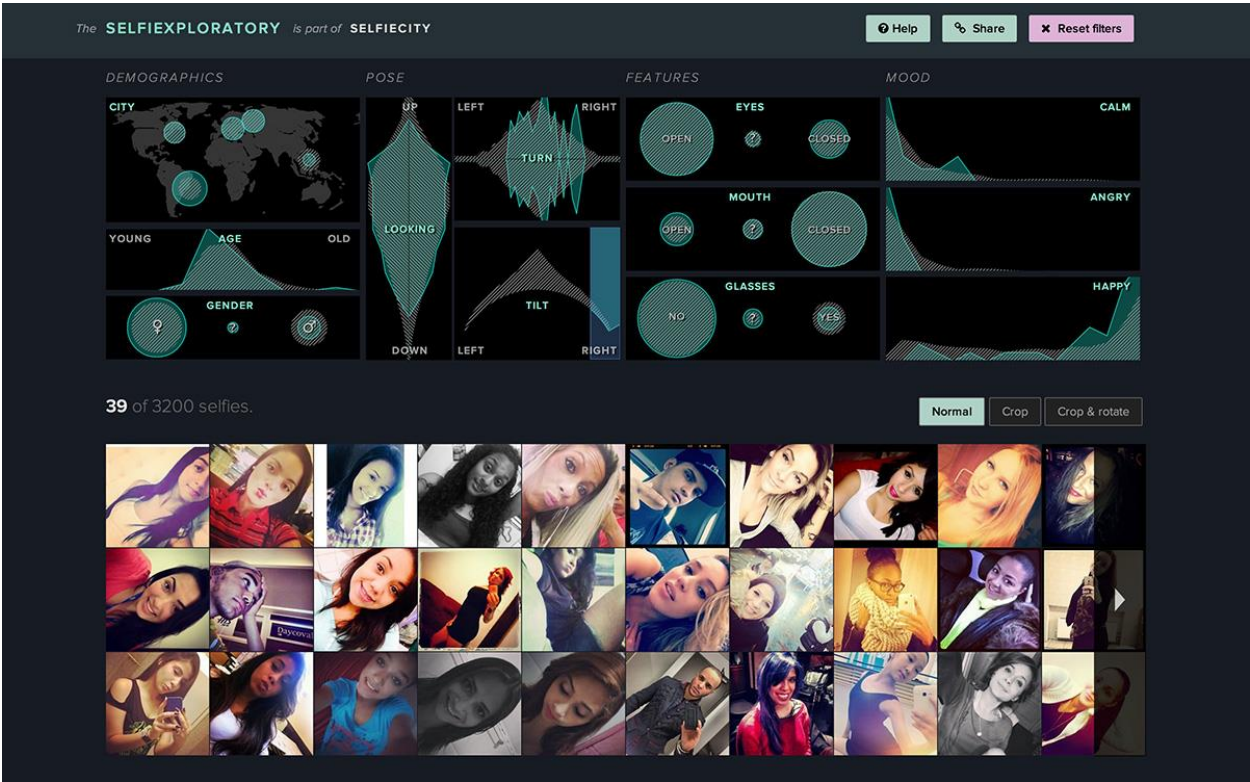
3a - Screenshot from *Selfiexploratory*, an interactive web application from selfiecity.net (2014).

3b – map showing locations of 3,691,003 tweets with images shared in London from November 2012 to July 2014

Figure 3.
Examples of the analysis of Instagram and Twitter images from selfiecity.net (2014) and http://selfiecity.net/london/, 2015.

Figure 3a:
Screenshot from *Selfiexploratory*, an interactive web application from selfiecity.net (2014). The application allows web visitors to explore patterns in a dataset of 3,200 Instagram selfie images we assembled for the project. The application is available at: http://selfiecity.net/#selfiexploratory. Project team: Lev Manovich, Moritz Stefaner, Mehrdad Yazdani, Dominicus Bayer, Daniel Goddemeyer, Alise Tifentale, Nadav Hochman, Jay Chow. Application design: Moritz Stefaner and Dominicus Bayer.

Figure 3B:
The map showing locations of all 3,691,003 public tweets with images and geolocations shared in London from November 2012 to July 2014. Designed by Moritz Stefaner for http://selfiecity.net/london/, 2015. Collection and analysis of Twitter data: Mehrdad Yazdani.

Our computational and informal analysis and visualizations of the collected images and data – over 15 million images shared in 16 global cities worldwide during 2012-2015 – suggest that a larger proportion of people in many countries using Instagram follow a "home mode" of the 20th century photography. *Home mode* is a concept developed by Richard Chalfen in 1987 book *Snapshot Versions of Life*. As summarized by Miller and Edwards "Chalfen's 'home mode' of communication showed that consumers typically share images—photographs, video footage—of traditional subjects such as birthdays and family holidays. He termed the participants in this home mode the 'Kodak Culture' who typically comprised family and friends and *knew the people in the images*." (Emphasis mine. Quote from Andrew D. Miller and W. Keith Edwards, "Give and Take: A Study of Consumer Photo-Sharing Culture and Practice," http://www.cc.gatech.edu/~keith/pubs/chi2007-photosharing.pdf, 2007.)

Of course, there are also many differences between 20th century *home mode* and Instagram. "Traditional subjects" now include food, selfies, parties, etc. The demographics of both photographers and people we see in photos also changed - in many places, the majority of Instagram users and subjects are people in their teens, twenties and thirties as opposed to older authors of personal photos in the 20th century. But the essence of *home mode* remains the same. The majority of Instagram authors capture and share photos that

are of interest to the author, her/his friends and perhaps family or expanded circle of acquaintances, as opposed to complete strangers. (Joane Carde-Harde recently argued that camera phones "make friendship rather than family central to snapshot photography." Carde-Harde, "Friendship Photography: Memory, Mobility and Social Networking," in *Digital Snaps: The New Face of Photography,* eds. Jonas Larsen and Mette Sandbye, 2013. So perhaps rather than using the term "home mode," we should use the term "friends mode".)

These authors are not trying to get tens of thousands of followers, not do they share only their very best photos. Instead, they use Instagram for documentation and communication with people they know. They may be happy if their photos get many likes and they don't mind getting more people to follow them and comment on their photos - but this is not their primary purpose. (See **Figure 4** for a samples of Instagram photos shared in five global cities in December 2014).

Here is some data from other studies that may support this conclusion. A study by Pew Research Center from August 2015 reported that among Internet users in the U.S, %28 used Instagram; among them, 18-29 age group accounted for %55, and %30-49 accounted for %28. Among U.S. teens, %59 were accessing Instagram ("Mobile messaging and social media 2015," http://www.pewinternet.org/2015/08/19/mobile-messaging-and-social-media-2015/). Another analysis Instagram in the U.S. in March 2015 asked teenage users how many followers they have. %39 did not know. %25 of people reported having 0 to 100 followers; %11 – 101 to 200 followers, and %6 – 201 to 300 ("Average number of Instagram followers of teenage users in the United States as of March 2015," http://www.statista.com/statistics/419326/us-teen-instagram-followers-number/).

Together, these studies show that that Instagram in U.S. at that time was used by large proportions of people in their teens, twenties, thirties and forties, and that among the teen users, the majority (%81) had small numbers of followers or did not even care much about the number of followers (Of course, in 2015, %70 of Instagram users were outside of U.S., the patterns in other global locations may be quite different.)

Note that the early study of mobile photography, already popular in Asia years before explosion of global social networks, reached a similar conclusion. The 2003 article by Mizuko Ito and Okabe Daisuke was based on detailed case studies of camera phone users in Tokyo. Entitled, "Camera phones changing the definition of picture-worthy," the article is worth quoting in length because it also suggests that early mobile photography was used in "home mode":

> "In comparison to the traditional camera, which gets trotted out for special excursions and events -- noteworthy moments bracketed off from the mundane -- camera phones capture the more fleeting and unexpected moments of surprise, beauty and adoration in the everyday."
> "For example, one 20-year-old college student snaps several pictures a day with her camera phone: a picture of her new haircut to send to a boyfriend; a really large shell that she found on a beach; her pet in a cute pose; or a photo of an interesting view from an escalator at a station that she frequents. These are photos of everyday moments and events that are *newsworthy only to an individual and her intimates*."
> "What counts as newsworthy, noteworthy and photo-worthy spans a broad spectrum from personally noteworthy moments that are never shared (a scene from an escalator) to intimately newsworthy moments to be shared with a spouse or lover (a new haircut, a child riding a bike)."
>
> (Mizuko Ito and Okabe Daisuke, "Camera phones changing the definition of picture-worthy," *Japan Media Review*, 08/29/2003.)
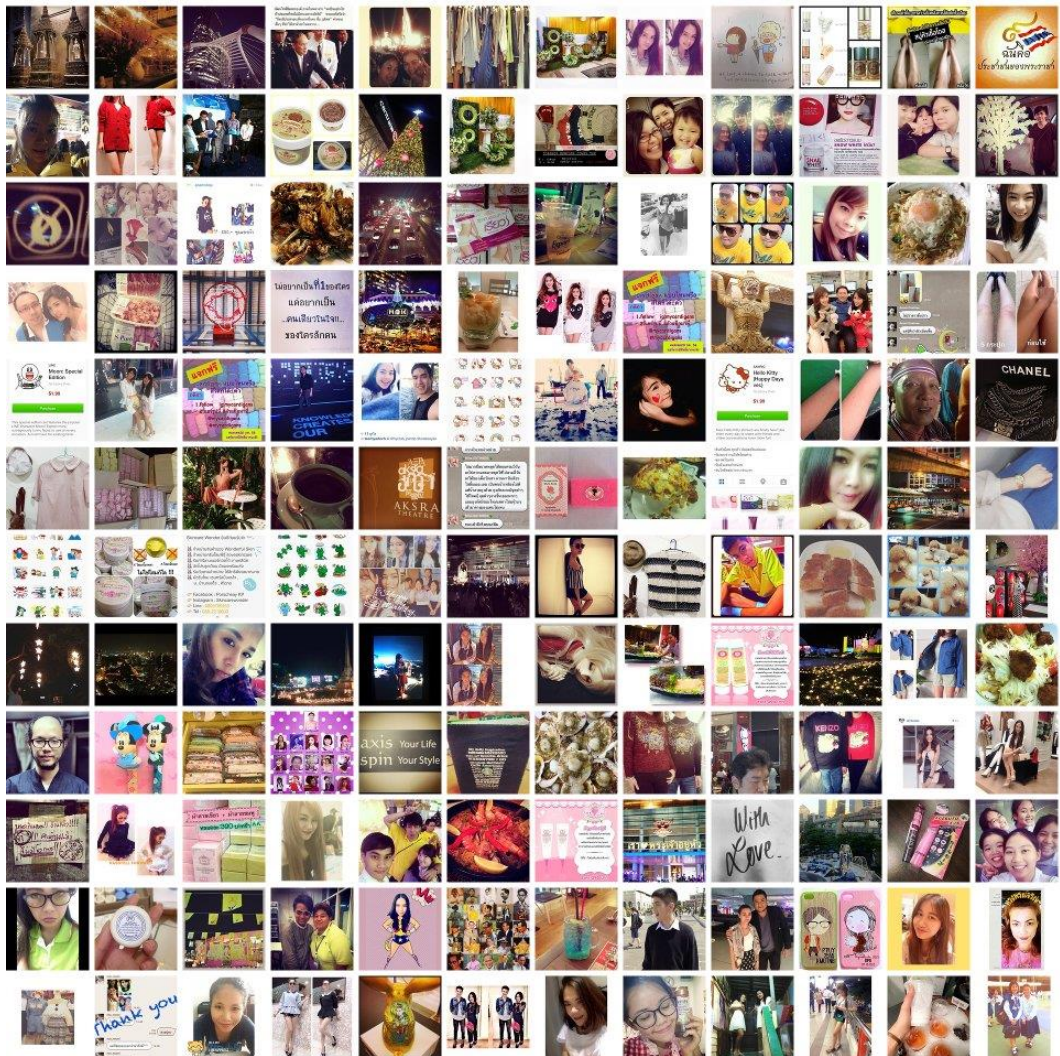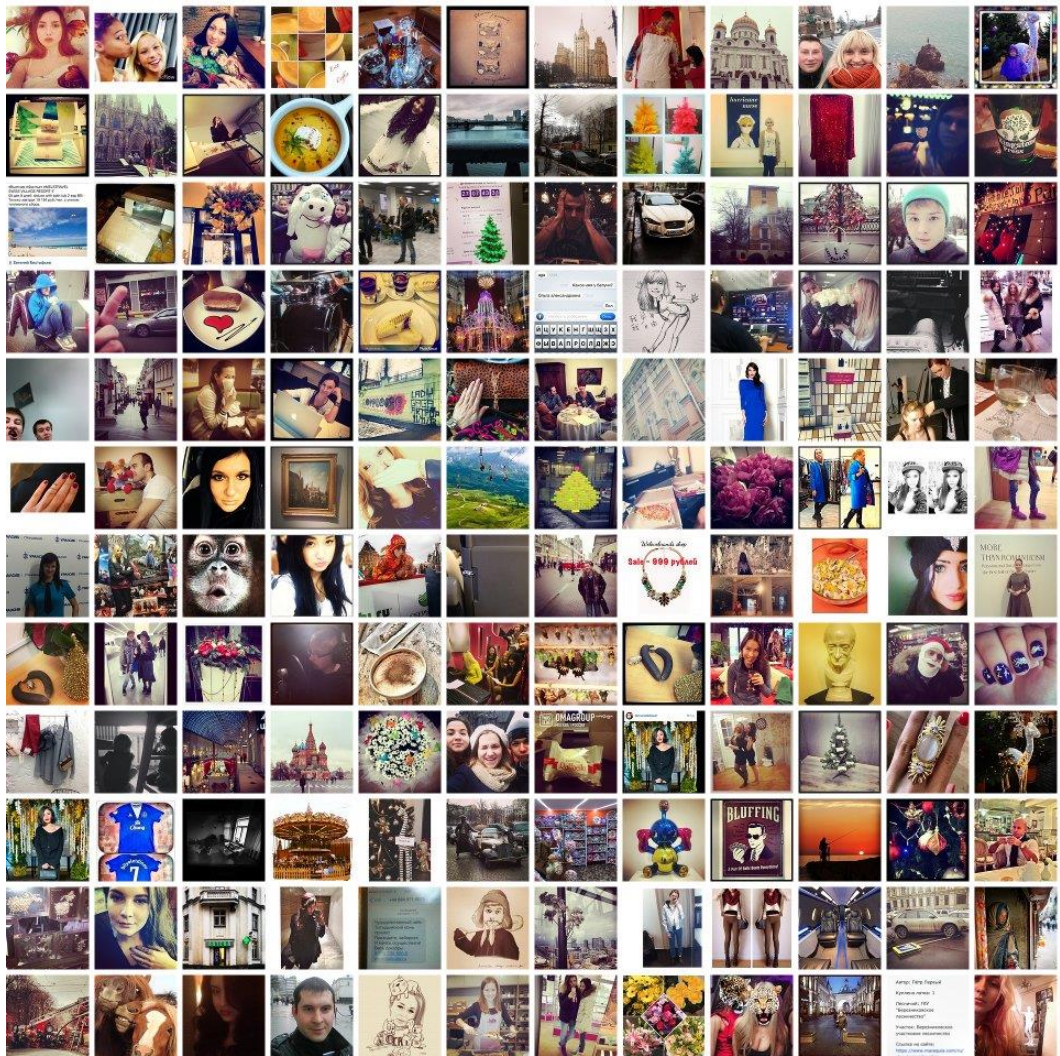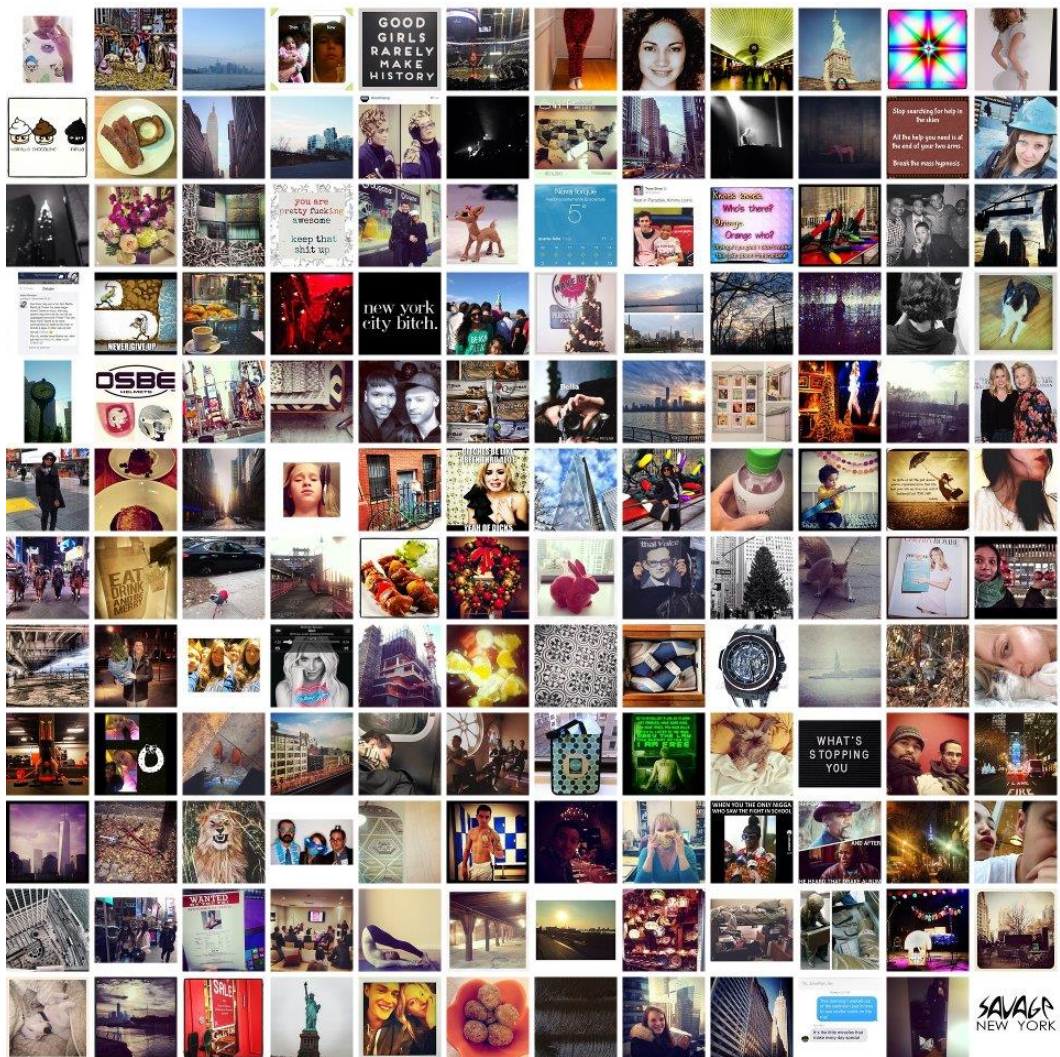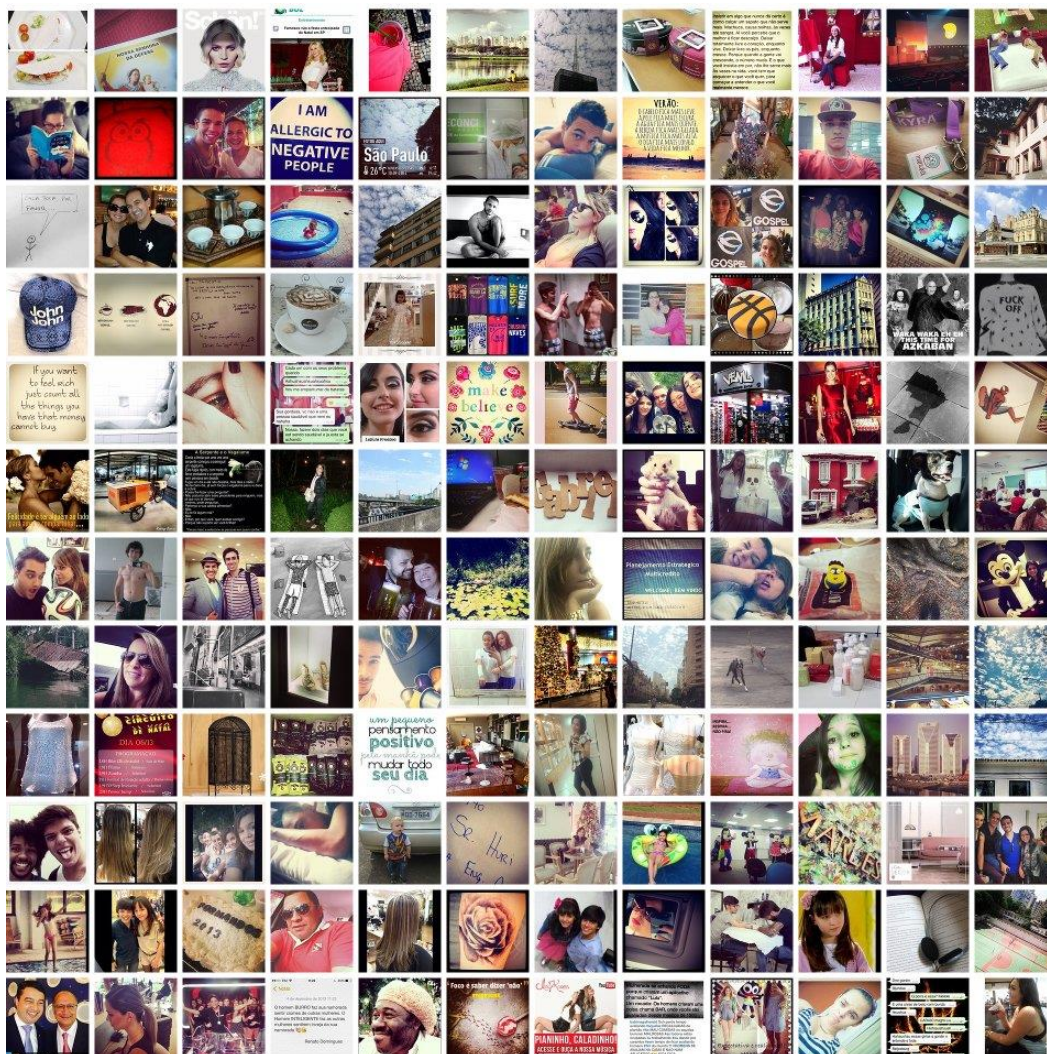
Instagram: Bangkok
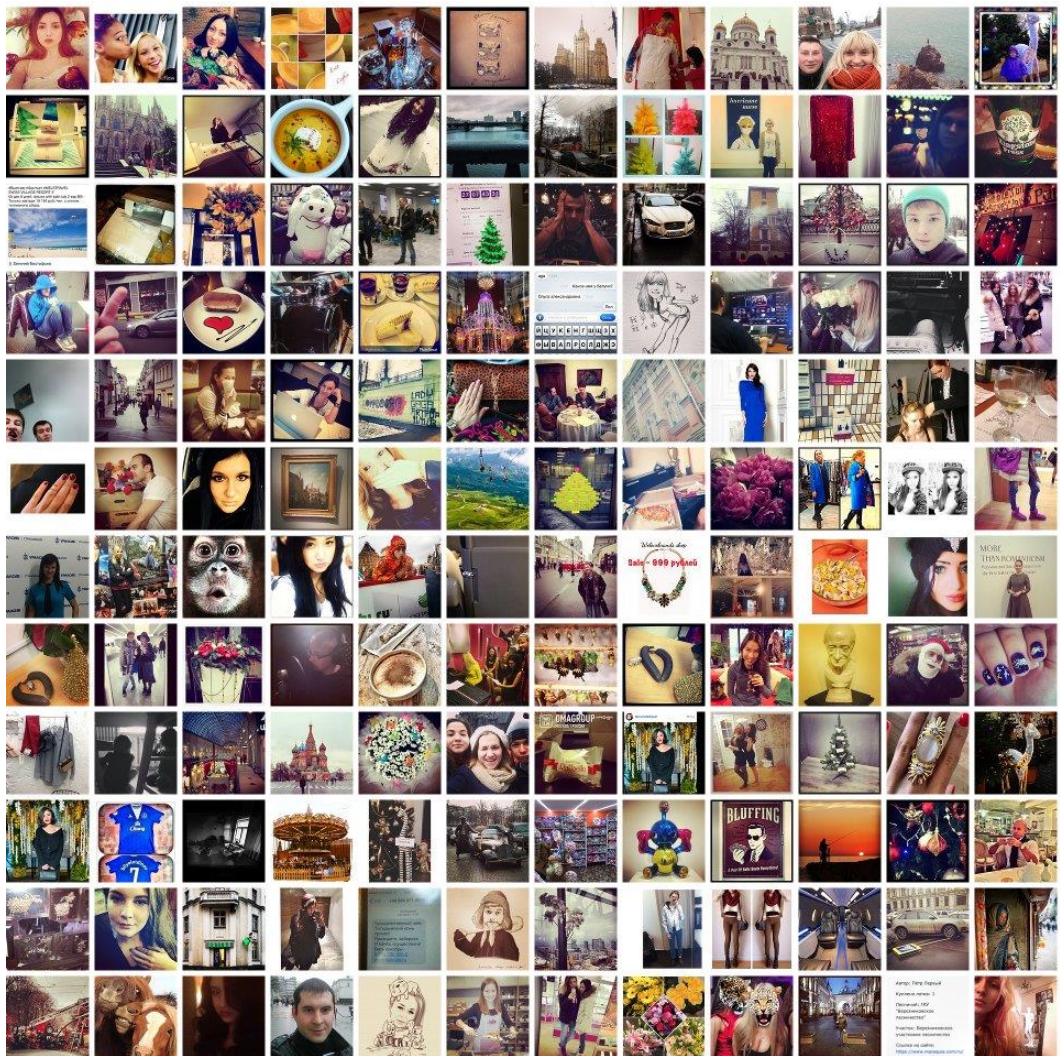
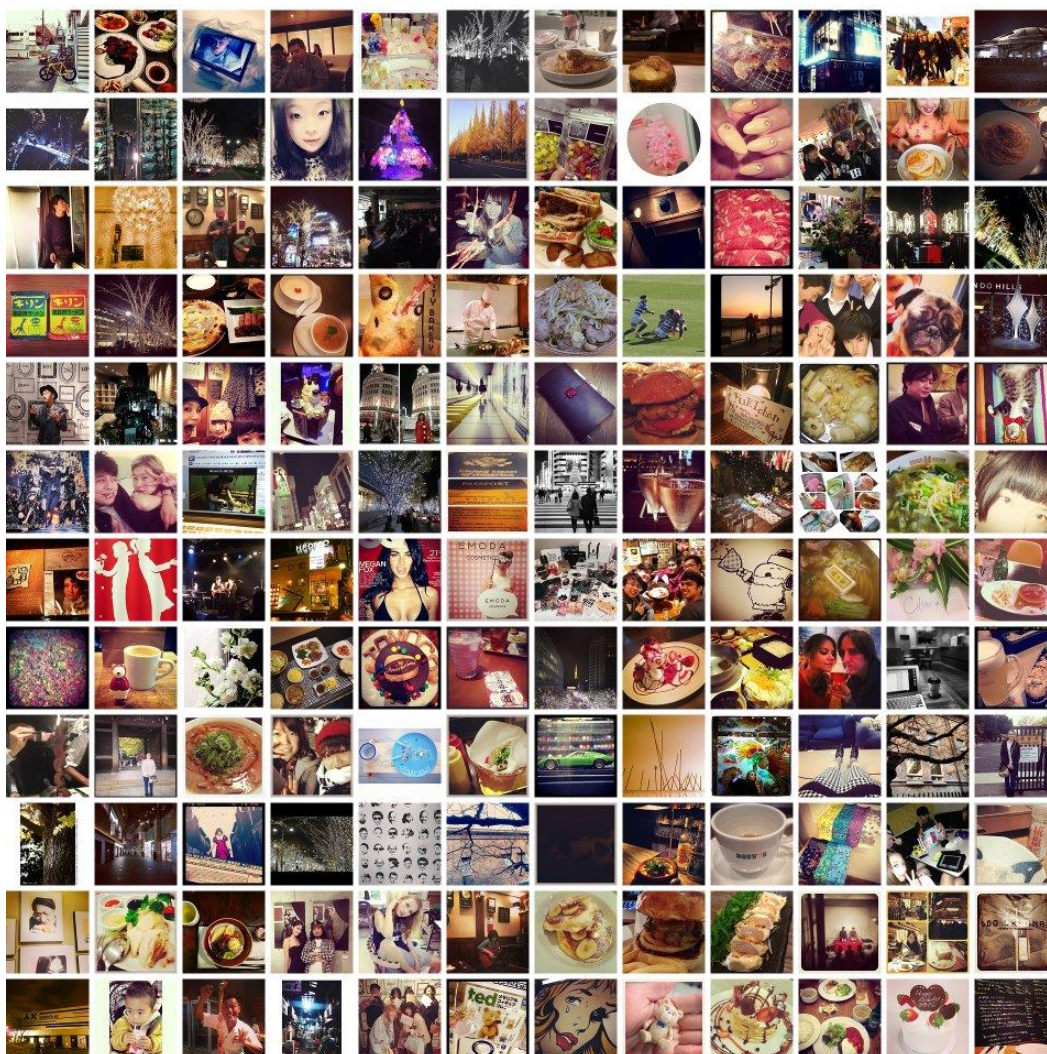Instagram: Berlin

Instagram: Moscow

Instagram: New York

Instagram: Sao Paolo

Instagram: Tokyo

Figure 4.
Samples of Instagram images shared in Bangkok, Berlin, Moscow, New York, Sao Paolo and Tokyo during December 5-11, 2013 between 12 and 2 pm every day. Higher resolution (1920x1920 pixels) of these montages can be download from this Flickr album:
https://www.flickr.com/photos/culturevis/albums/72157662395080273

To understand what people share on Instagram in different geographic areas, we download and then visualize all images shared in a particular area over a period of time. The montages above show small random samples of Instagram images shared in Bangkok, Berlin, Moscow, New York, Sao Paolo, and Tokyo during December 5-11, 2013. The samples come from the larger data set we created for Selfiecity project (see http://selfiecity.net) - all 656,000 images with geolocations shared during that week in 5 km x 5km areas of each city. Note that because only some users make location visible for some of their photos, this may affect the kinds of photos we were able to download using location as parameter. According to the results of the analysis of 5,659,795 images shared worldwide by 369,828 users up to 2014, "more than 18.8% contain location information" (Manikonda, Hu and Kambhampati, Analyzing User Activities, Demographics, Social Network Structure and User-Generated Content on Instagram, 2014). Since we only downloaded images with location information, there may be different patterns in the other %80 of images that we can't see in our dataset.

However, our own generalization that majority of people posting to Instagram (in 2012-2015) use it in "home mode" does not cover other *photo cultures* on Instagram which, as we see below, have different goals and use different content. Moreover, it does not tell anything about *visual aesthetics* of Instagram images. And without considering the aesthetics, analysis of content alone is misleading. That is, if we simply count categories of content in a sample of Instagram images (portraits, selfies, food, landscapes, cityscapes, etc.), we will miss the differences between the home mode and other photo cultures on Instagram.

For example, the same images of the *ordinary* subjects – for example, everyday objects, cups of coffee, or person's clothing – can acquire very *different meanings* depending on *how* they are photographed. They may look like random things in a photo background - or be the subjects in the sophisticated, styled composition. A photo showing a person holding flowers may be the result of following established norms of amateur photography (which suggests what moments, people or objects in person's life should be captured and shared, and how these subjects should be photographed) – or the result of conscious use of the strategies from the 20th century art and commercial photography (**figure 17** - appears in Subjects and Styles in Instagram Photography, part 3) that explored contrast between shapes and textures of natural and human-made objects. If we reduce photos to descriptions of their content, such differences will be lost.

At the same time, to be meaningful, the analysis of aesthetics has to also include subjects of photos – along with the intentions of a photographer, other context such as tags and photo descriptions, who follows this user and comments - and also history of photography and visual design. To continue with the same example, a photo with unbalanced composition and a subject cut off by the frame maybe unintentional, signaling a very casual photographer. Or it can also represent the work of a very sophisticated Instagram author working with "snapshot" aesthetics previously explored by many famous photographers such as Robert Frank, Nan Goldin, or Wolfgang Tillmans. This difference may be a result from subtle visual choices made by the author – or it can be purely the effect of context (for example, if we see that all user photos have a consistent snapshot aesthetics, we will realize that they are not accidents.)

In short, we believe that photos' content, their aesthetics and their larger context can't be separated in life, and they should not be separated in analysis of Instagram medium. Therefore, we don't think that analysis of visual form as the thing in itself is very useful. In this article, we start by dividing Instagram photos into a few types based on their visual differences, and then move from this starting point to considering other differences: how people understand and use this medium, how they implicitly follow conventions of photo culture or define their styles in opposition to these conventions, how they construct

their self-representations, and how aesthetics, subjects, and techniques function together to communicate meanings and to create emotional effects and bonds between authors of photos and their followers.

We could have chosen other starting points, of course. So why chose *visual aesthetics*?

1) Just as it the case with all other cultural domains, the aesthetic preferences and choices made by *all* Instagram users – "choice" here means what photos a person likes and who she follows on Instagram, and not only what she herself posts – may function to legitimize their social and economic status. There is a rich literature in the field of sociology of culture that looks at the relations between aesthetic preferences and social status. The two most influential theorists in this area have been Pierre Bourdieu and Richard A. Peterson. (See Pierre Bourdieu, *[Distinction: A Social Critique of the Judgement of Taste](#)*, 1979, and Richard A. Peterson and Roger M. Kern, [Changing Highbrow Taste: From Snob to Omnivore](#), 1996. For a reconsideration of Bourdieu's and Peterson's arguments, see Philippe Coulangeon and Yannick Leme, ['Is Distinction' really outdated? Questioning the meaning of the omnivorization of musical taste in contemporary France](#), 2007).

2) People use particular visual aesthetics and styles to define their membership in subcultures, to signal their "identities," and to identify with particular lifestyles. (For a good overview of some of the relevant theories, see Benjamin Woo, [Subculture Theory and the Fetishism of Style](#), 2009).

3) Photography, including Instagram's version, is about making *visual images* that communicate through their *techniques*, *styles*, and *visual choices* - and not only content.

4) A significant proportion of Instagram users care a lot about aesthetics. They use Instagram in aesthetically sophisticated and nuanced ways, as we will discuss in detail below.

5) One of the main reasons behind Instagram app very quickly coming to dominate mobile photography was its filters – a very quick mechanism to take any photo and make it look visually interesting and appealing. (See "[How did Instagram become successful](#)" on Quora.) (After Instagram was released in 2010, within days it became number one app in Photo category on Apple iStore in many countries. At the end of 2015, Instagram was the seventh largest global social network in terms of active users, behind only Facebook, WhatsApp, QQ, Facebook Messenger, Qzone and WeChat. For the numbers, see Sarah Perez, [The Rise Of Instagram: Tracking The App's Spread Worldwide](#), 4/24/2014; http://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/, accessed December 30, 2015).

In other words: if Google is an information retrieval service, Twitter is for news and links exchange, Facebook is for social communication, and Flickr is for image archiving, Instagram is for *aesthetic visual communication*.

While some points in our discussion below may refer only to Instagram and its specific user interface, many other points apply to mobile photography in general, with Instagram representing here this new photo culture. Historically, popularization of photography and growth in the numbers of people taking photos was marked by a number of moments then new smaller and/or significantly easier to use cameras were introduced: for example, Kodak Brownie in 1900, Leica I in 1925, or Kodak Instamatic camera in 1963. (The later made square prints, and this, along with square Polaroid prints, was the inspiration for original Instagram app). The combination of iPhone (2007-) and photo-centered networks as Instagram designed specifically for this new type of "networked camera" (this term is from Alise Tifentale, [Art of the Masses: From Kodak Brownie to Instagram](#), 2015) opened a new stage in photography's popularization.

In contrast to earlier photo services such as Flickr, "Instagram was meant to be an app for sharing pictures with people, not an app for photographers" ([Sandhya Ramesh](#) on Quora, 4/23/2015). Or, to quote the conclusion of 2014 study that analyzed 5.6 million

Instagram images: if Flickr users "share high-quality pictures," Instagram users share "everyday activity pictures captured by smart phones" (Lydia Manikonda, Yuheng Hu, Subbarao Kambhampati, [Analyzing User Activities, Demographics, Social Network Structure and User-Generated Content on Instagram](#), 2014). (Note that the use of social and media sharing networks, demographics of users and their visual and sharing practices change, so this conclusion may not hold for 2016. In our studies we analyzed samples of Instagram images from 2012-2015, so all details about Instagram in this text refer to this period.)

This new stage has its own specific new characteristics. The "network" effect (instant global sharing, getting positive feedback from other users, being able to discuss photos with others, being able to use Instagram on other popular social networks, etc.) are, of course, very important, but they don't cover everything. Many of the answers to the question [what made Instagram so successful?](#) on Quora point out how Instagram filters enabled people to make "bad" photos look "good"; they also name filters as the number one reason for Instagram success. (The earlier app Hipstamatic already used filters but Instagram simplified their use and the overall experience of sharing photos). This is another powerful reason why analysis of *photo aesthetics* is crucial for understanding our current stage in the history of popular photography – and visual culture in general.

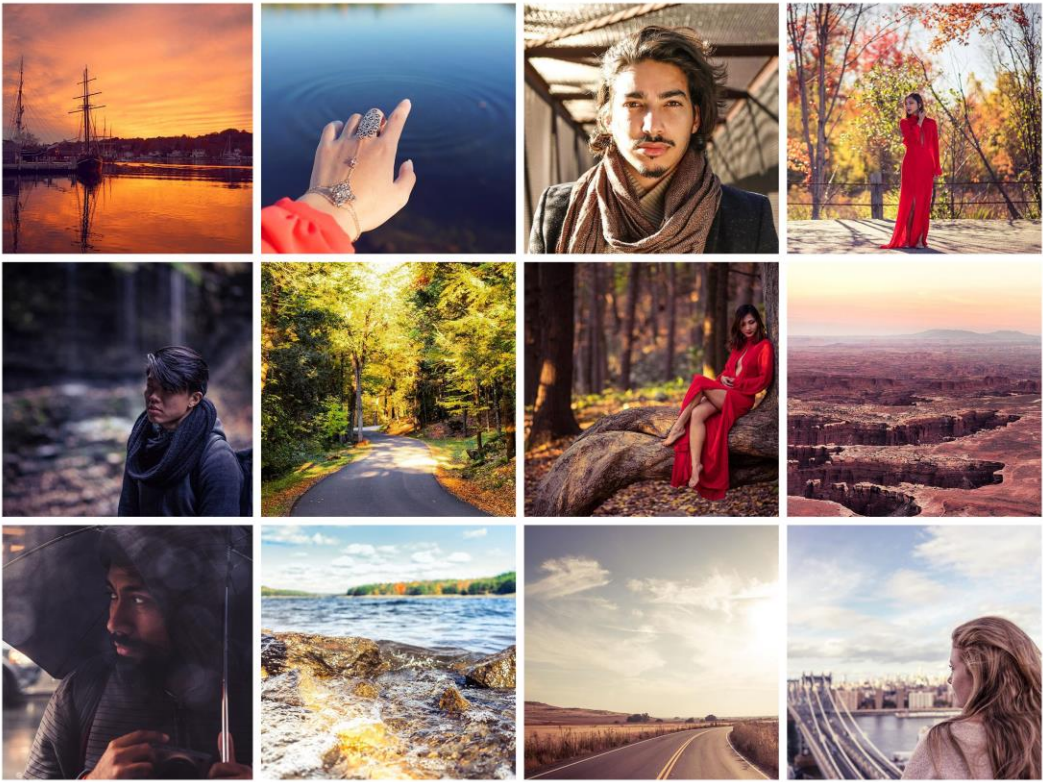**Three Types of Instagram Photos: *Casual*, *Professional*, and *Designed***

What are some of the types of Instagram photos today and how they relate to the 20th century photo culture, and especially the period after 1960 when color photography become more common? The examples of personal color photography from 1954-1976 are shown in **Figure 1.**)

We will analyze what we see as three common types of Instagram photos. We call these types *casual*, *professional*, and *designed*. (The word *styled* is also a good term for the third type). The examples of each type selected from Instagram are shown below in **Figure 5.** (Figure **5a** - casual photographs; **5c** - professional photographs; **5b** and **5d** - designed photographs.)
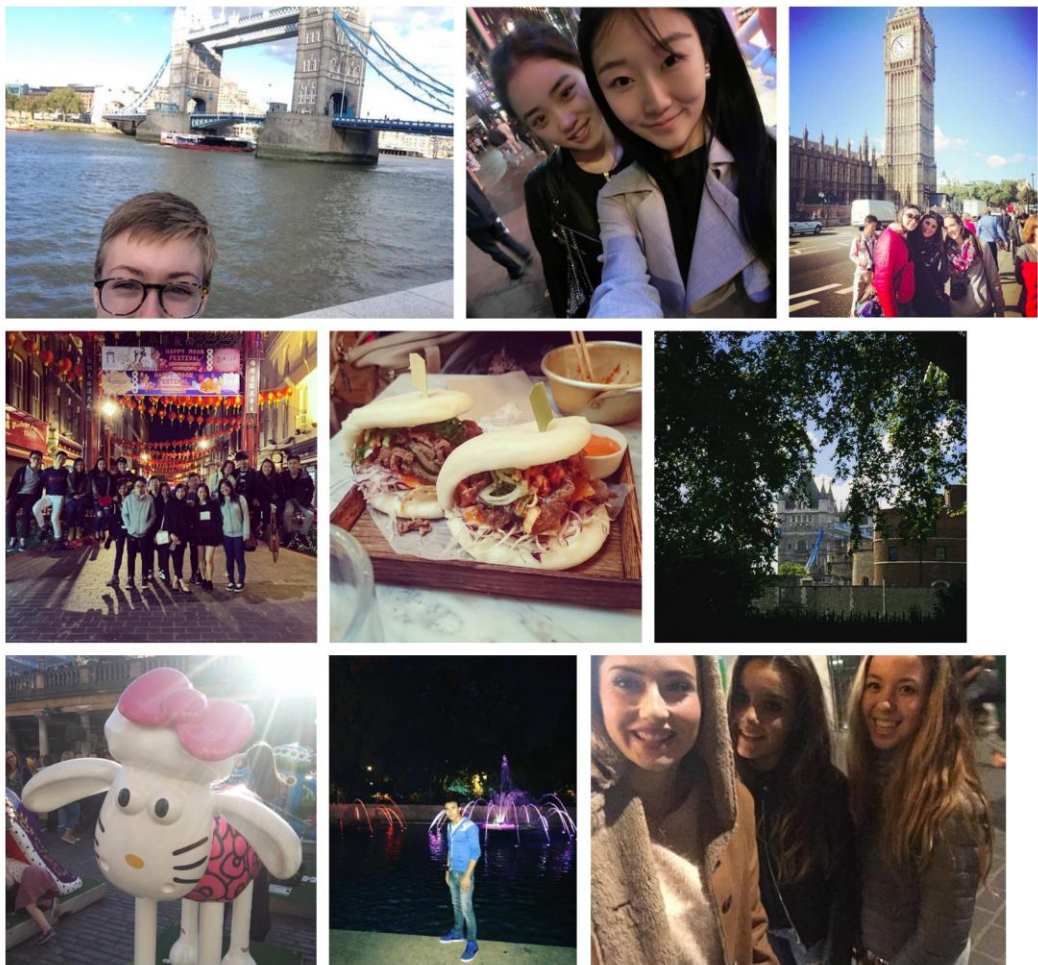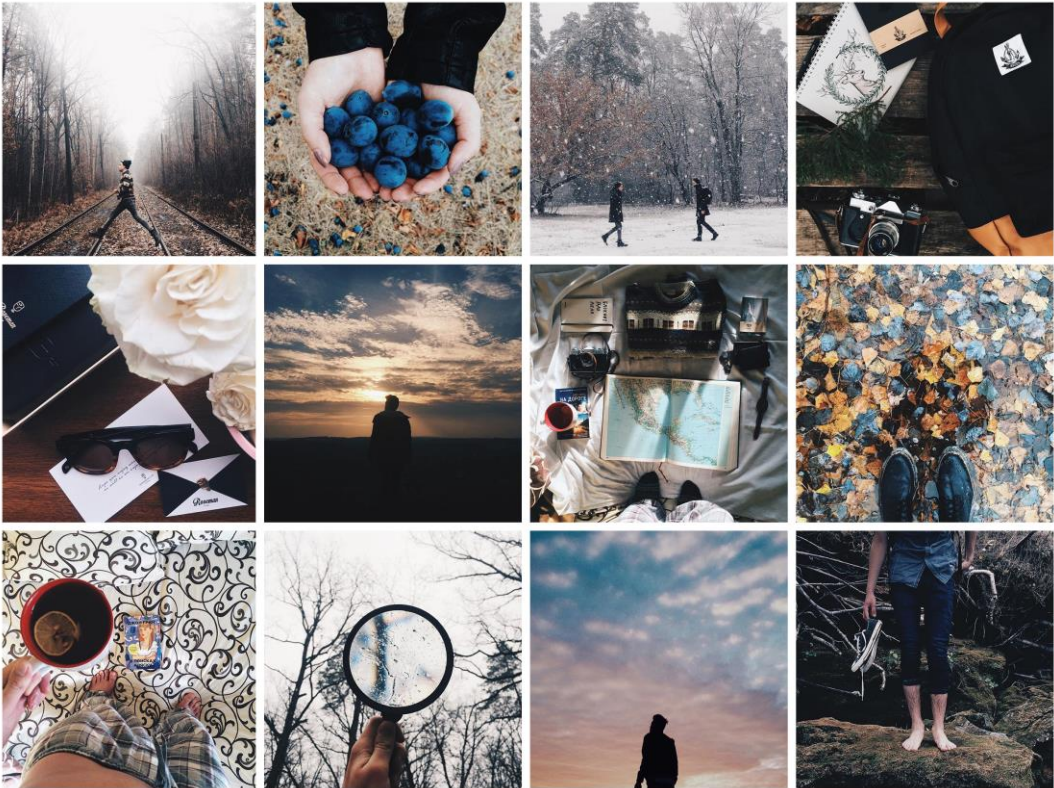
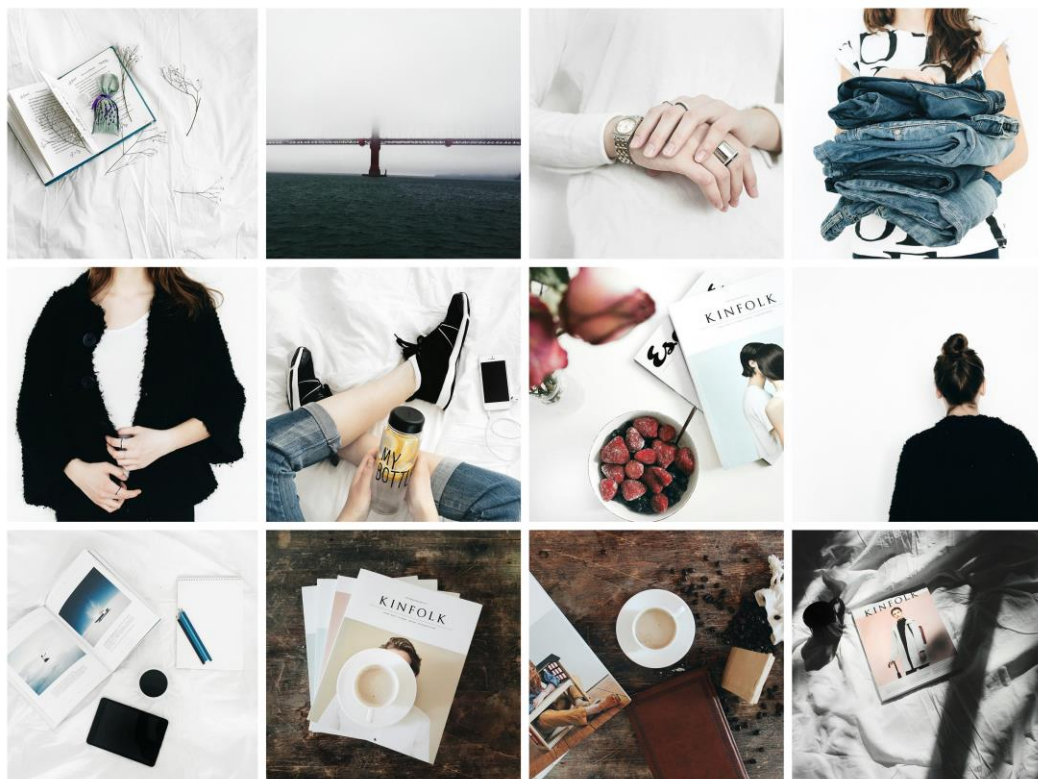

5a - *casual* photos (multiple authors)

5b – *professional* photos (single author)

5c - *designed* photos (single author)

5d – *designed* photos (single author)

Figure 5.
Examples of casual, professional and designed Instagram photo types.

5a. *Casual* photos selected from 152,000 geolocated images shared on Instagram in 5 x 5km central area of London during 9/21-9/28, 2015. Images were collected for http://selfiecity.net/London.

5b. *Professional* photos from Instagram gallery of @neivy (Connecticut, **USA**) during October-November 2015. **869** posts, **11.7k** followers (as of 12/28/2015).

5c. *Designed* photos from Instagram gallery @recklesstonight (Kiev, **Ukraine**) during October-December 2015. User account: **123** posts, **52.1k** followers (as of 12/28/2015).

5d. *Designed* photos from Instagram gallery of @vita_century (**Russia**) during February-March 2015. User account: **255** posts, **28.9k** followers (as of 12/28/2015).

Both "professional" and "designed" photo type are examples of what Alise Tifentale calls "competitive photography." (Tifentale, Defining Competitive Photography, 1/18/2016). The difference is whom the authors compete with for likes and followers. The authors of professional photos aim for "good photo" aesthetics established in the second part of the 20th century, so they compete with other authors and lovers of such "classic" aesthetics including many commercial photographers. The authors of "designed" photos associate themselves with more "contemporary," hip," "cool" and "urban" lifestyle choices and corresponding aesthetics, so this is their peer group on Instagram.

The casual, professional, and designed types are not intended to be exhaustive and cover every image on Instagram. Note also that these types refer to individual photos on Instagram and not the whole author's galleries. Some authors consciously curate their galleries to only feature professional or design photos. Many more Instagram users are not as consistent, and mix two or three types. For example, a casual photographer may sometimes take time to create more professional looking photos, and also, influenced by what she or he sees in other galleries on Instagram, also attempt sometimes to make design photos featuring individual objects or "flat lays." We leave out from our analysis accounts of companies and brands and individuals directly advertising products or services that are often created with professional photo and studio equipment and professional models. We don't discuss the essential non-visual parts of Instagram communication: tags and descriptions, that are often few paragraphs long - thus inverting original Instgaram's

intention to be an image centered medium and instead using it as a blogging medium. We don't look at network characteristics of Instagram, such as connections between followers and users their follow (For this analysis, see Lydia Manikonda, Yuheng Hu, Subbarao Kambhampati, [Analyzing User Activities, Demographics, Social Network Structure and User-Generated Content on Instagram](#), 2014). And finally, given that the content, uses, aesthetics, and technologies of all network media including Instagram evolve, our analysis reflects Instagram use during particular period of 2013-2015.

We focus on casual, professional, and designed image types because they are useful in revealing continuities and differences between Instagram photography and earlier periods in photo history. To get an idea about the popularity of these photos types on Instagram, we manually tagged a sample of photos from the larger dataset of 152,000 Instagram photos uploaded by users in the center of London during one week in September 2015. (For details about this dataset, see http://selfiecity.net/london). The collected dataset only has publicly shared images where users explicitly selected a location in the Instagram app. As a result, this dataset has very few promotional images by companies, cultural events or places (fashion shows, art galleries,) or celebrities. Almost all images appear to be shared by Londoners or visitors to the city from around the world.

We have manually tagged a sample of our dataset to determine the proportion of casual, professional, and design photos. Here are our findings: casual photos is 80%, professional photos is %11, and designed photos is %9. Of course, these rates can be significantly different in other countries and cities, but given the presence of tourists from everywhere in the center of London from where we collected photos, we believe that the proportions we found are not irrelevant. This motivates the need to discuss these different types of photos rather than treating Instagram as a visual monoculture.

A note about our use of terms. The four common terms used in the 20th century to separate types photography are *personal* photography, *amateur* photography, *professional* photography, and *art* photography" (see Martin Hart, *Ubiquitous photography*, page 7). *Personal* photography can be equated with the already described "home mode": these are pictures aimed for family and friends. *Amateur* photography refers to activities of people who invest considerable time to learn photo techniques, compete with other amateurs, and participate in photo clubs (popular in the 20th century) or online groups (today), and enter competitions. *Professional* photography is photography where authors get paid; its genres include fashion, celebrity, food, advertising, editorial, portraits, weddings, etc. Finally, *fine art photography* is easiest to define as being in opposition to the other three. The focus is on aesthetic goals and unique style, rather than on following of the conventions of a particular professional genre. Of course, many documentary and professional photographers who worked for magazines also developed their unique styles, while many of the "art photographers" operated within conventions of art photography of their time. When photography started to enter museums, galleries and the art world, many earlier documentary and professional photographers were retroactively presented as "artists." In general, the meanings of each of these four terms (and parallel terms in other languages) have been changing historically throughout the history of photography, and this makes their use quite problematic if we are trying to place Instagram in historical context, unless we always state what period we refer to.

We consciously avoid using the term "amateur photography" in the discussion below – because historically there have been not one but at least a few rather different "amateur" photo cultures separated by equipment used, the goals of people taking photos and their use, the presence of special amateur organizations, publications and competitions, and so on. In terms of skills, the personal and the amateur also correspond to a continuous dimension from a complete novice to an expert photographer with many years of experience and fully professional photo abilities. The term "professional photography" can be equally problematic. Normally we refer to photographers as professionals if they are selling to, or create their photos for, clients. But what about people who submit their photos to any of the stock photography databases or *microstock* agencies?

(Microstock agencies accept photos from wider range of people that traditional stock agencies, and also may sell them for lower rates such as US $0.20.) For example, in January 2016, a leading microstock company Shutterstock was receiving around 50,000 new photos daily, contributors were paid starting at US $0.25 per image sold, and anybody older than 17 could apply to become a contributor by submitting a portfolio of 10 digital photos (http://submit.shutterstock.com/payouts, accessed 02/13/2016). Such contributors may sell only 1 image per month, or 10, or none. This example shows that today "professional photographer" also become an ambiguous term. We will, however, retain the term "professional" - but only in reference to aesthetics of images, and not whether the person producing them is paid. And finally, although the term "art photography" (or "fine art photography") can be similarly problematic, we will retain it simply as a useful designation for another sphere of photography organized around its own conventions and criteria for professionalism and inclusion ("career," "exhibition," "photo book," "personal vision," etc.)

Casual Photos

The overall purpose of *casual photos* is to visually document and share an experience, a situation, or portray person or group of people. Frequently these goals are combined - for example, a photo may show a group of friends engaged in activity X in place Y in time Z. In that, many casual photos on Instagram are similar in content and function to "home mode" photography in previous periods.

The documentation function was integral to photography from its beginning in the1830s, but Instagram *intensifies* it. Instagram interface shows the date and time for each photo and exact location both as longitude and latitude numbers and as a point on a map (if a user chose to share the location). Increasing photo contrast, sharpness and also bringing up details in shadows in photos by more visually sensitive users also adds to this intensification effect.

Do casual photos have any distinct visual aesthetics? In these photos, visual characteristics such as contrast, tones, colors, focus, composition, or rhythm are not carefully controlled, so from the point of view of proper *good photography* these are often (but not always) *bad photos*. We can guess that some users are aware of these characteristics but did not want to spend time to control them; others have tried to make good photos but failed, and some are simply unaware. Regardless of the reasons, such photos are primarily documentation records, as opposed to aesthetic objects. Or, to put this differently: the content of casual photos is more important to their users than following the rules of good photography, so a "bad photo" with the important subject is accepted rather than rejected.

In our informal browsing of galleries of random Instagram users, we saw very few users who appear to be completely unaware and only take and share "bad" photos. The majority has galleries that combine some visually unsophisticated photos, and some photos that show some awareness of color and composition. Does Instagram improve everybody's visual literacy? Do easy-to-use Instagram controls and filters allow even naïve users make decent photos? These are the interesting questions worth investigating empirically. (One interesting trend is the following: the users who share consistently bad - from the visual point of view – photos mostly post their selfies.)

While the casual photos may not have refined visual characteristics of "good photography," they do follow another set of popular image making and social conventions that define what is worth documenting, and how different subjects should be photographed. Most of these conventions come from the world of vernacular photography of the 19th and 20th century, but some have emerged with Instagram (for example, a photo looking down at one's shoes). Individuals or groups of people should appear in the center of an image. In capturing portraits and selfies, full faces should be shown. Landscape photographs should have a horizontal horizon line, as opposed to using strong angles. Food should be photographed from an angle. Certain subjects are worth photographing –

sunsets, historical landmarks, tourist attractions such as Times Square in New York, or Big Ben in London. (For example, in our analysis of 10.5 million Instagram photos shared in New York in 2014, %13.5 of all images was shared in Times Square area. For details, see http://on-broadway.nyc/).

The conventions of vernacular photography dictate both *what and how*. They filter the visible world and the flows of human lives to select the moments and occasions worth documenting. In this sense casual photography is anything but casual. The images in **Figure 5** show some of these conventions for Instagram casual photography; the images in **Figure 1** shows some conventions for personal photography in the analog era. This photo activity can be said to exactly invert the advice that was given by famous *Vogue* art director Alexei Brodovitch to his photo students: "If you see an image you have ever seen before, don't click the shutter." Instead, creators of photos shown in **Figure 1 and Figure 5** seem to follow the rule: "If you image looks like many images you have seen before, capture it."

In summary, casual photography follows its own set of rules just as professional and designed photos do, as we will see below. More precisely, rather than using the term "rules" which implies only two possible behaviors – follow the rule or go against the rules – we may instead think of *probabilities*. David Bordwell used the concept of probability to describe film style in the mid-20th century Hollywood cinema and the choices made in selecting what and how will be shown in the next shot given previous shots, but we can also apply this concept to still photography and video by individuals. (See David Bordwell, "Classical Hollywood Cinema: Narrational Principles and Procedures, in *Narrative, Apparatus, Ideology: A Film Theory Reader*, ed. Philip Rosen, Columbia University Press, 1986.) That is, we can propose a hypothesis that Instagram casual photos are more likely - in other words, have higher probability - to show some subjects rather than others, and are also more likely to show these subjects in particular ways in terms of composition, point of view, focus, lighting, etc. The same is probably also true for professional and designed photography, but the distribution of probabilities values for subjects, photographic techniques and editing will be different for each type. Given that today mobile phones can hold thousands of photos and also automatically back them up to network services - as opposed to the 20th century 35mm still film formats that had only 12-36 exposures and thus encouraged careful planning of every shot – it would be interesting to see if the distributions of subjects and techniques in contemporary casual photography has a bigger "long tail" (i.e., subjects and techniques use with less probability) than in the 20th century amateur non-competitive photography. (For history of film formats for photography, see https://en.wikipedia.org/wiki/35_mm_film).

How do photo sharing apps and services such as Instagram, Pinterest, and Tumblr, their user interfaces, and particular navigation and organization functions affect contemporary photo conventions? And how did designs of 20th century cameras and other commercial elements of popular photo culture helped to shape these conventions in earlier periods? These are fascinating questions beyond the scope of this text. One thing we can note is the adoption of controls for a number of scene types that already happened in analog film cameras. Digital cameras of 2000s expanded the number of scene settings offered. Today they may include portrait, candlelight portrait, night portrait, fireworks, food, children, pet, landscape, sports, macro, etc. The dedicated controls for these subject categories both reflect what people like to photograph and at the same time enforce these preferences, making them appear natural. Here, the conventions are literally hard wired in camera designs.

A complementary development in the 2010s is automatic organization of user's photos into a number of categories offered by photo storage and organizing software such as Google Photos app. The latter classifies photos into People, Places, and Things that for example can include Selfies, Sky, Skyscrapers, Cars, Posters, Skylines, Beaches, Food, etc. (Google Photos sub-categories for *Things* category, Manovich's iPhone, 01/03/2016.) This automatic classification of photos into familiar categories by software further naturalizes these categories for users of these apps.

Finally, we should note that not all casual photos are taken by casual photographers. Some of them are intentionally created by authors who have professional photo skills but who on purpose want to feature casual photos in their galleries. In photography's history, the intentional adoption and even intensification of casual look by professional art photographers happened already a number of times – such as, for example, in Robert Frank's 1958 photo book *The Americans* later credited with establishing "snapshot aesthetics." While 83 photos in the book often look like happy accidents, Frank selected them from 28,000 photos he took across the U.S. over more than two years. Different types of snapshot aesthetics were developed in the 1960s by Japanese photographers such as Yutaka Takanashi and Daidō Moriyama in the 1960s, by Kharkiv School of photography in Ukraine that included Boris Mikhailov (who referred to his practice as "bad photography"), by the American William Eggleston (credited with bringing color to art photography - combined with the snapshot aesthetics), and many others in the following decades (see **Figure 6**). (For The Kharkiv School, see Igor Manko, [The Kharkiv School of Fine Art Photography](#).)

Today on Instagram, many professional fashion models use casual aesthetics for their photos, for example. In contrast to their super-polished and controlled images in ads and editorials, their Instagram galleries feature "non-essential moments" of their lives (our inversion of Cartier-Bresson's "the decisive moment"). This does not mean that these images are in reality "unpremeditated, unintentional, spontaneous" – but it also does not mean that they are "staged, planned, calculated." In contemporary culture (including Instagram), such categories are neither in opposition, nor are they "blurred." Our intuition is that contemporary cultural subjects and artifacts they and many others produce exist outside of categories are in a different space with its own coordinates, which still needs to be described.

The comparison between examples of personal photos in **Figure 1** and examples of different kinds of *snapshot aesthetics* from art photographers in **Figure 6** supports such intuition and show that using any simple sets of binary categories oversimplifies things. When taken together, we can say that these art photographers (and these are only a few of many others identified with snapshot aesthetics) opposed both aesthetics of commercial photography of their time and also earlier modernist photography (see **Figure 14 and Figure 15**) if they lived in the West, or state-approved propagandistic photography if they lived in Communist countries. But taken separately, we can see that each developed a different visual language of the casual.

6a - Robert Frank

6b - Daido Moriyama and Yutaka Takanashi

6c - William Eggleston

Figure 6.
Examples of work by well- known photographers referred to as "snapshot aesthetics" practitioners.

6a. Robert Frank, two photographs from the book *Americans*, 1958.

6b. Daido Moriyama, "Man and Woman, Yokohama," 1969; Yutaka Takanashi, 1965.

6c. William Eggleston, two photographs from 1970 and 1976.

The works of these photographers also make it even clearer that there was *nothing casual* in amateur photography in the same decades (**Figure 1**). Remember that users of mass market cameras and films had to rely on the special labs for processing slide film or getting prints, and this was not free and also required additional time and trips. So while certainly mistakes were made and bad photos were taken, the ones that were printed and survive are the successful ones. (Unfortunately, since today there is no archive of digitized amateur photos from any period in the 20th century which is sufficiently big and random, it's very hard to do any qualitative analysis of amateur culture in retrospect, and prove or correct such intuitive evaluations.) The short color film rolls and cartridges were too important to waste on random photos, or on taking many photos of un-edited life before the camera in the hope that one of these photos will turn our great. Moreover, when taking photos of human subjects, the amateurs followed the conventions and arranged their subjects by asking people to stand together, in particular order, smile, etc. In summary, while we may think today of older amateur photography as "casual" and the photos as "accidental," exactly opposite was most likely true. Only with the mass adoption of digital cameras in 2000s more casual photography become possible, because now cameras could store many photos.

Just as with realism in literary fiction, it appears that true systematic "snapshot aesthetics" was only achievable by hard working full time art photographers such as the people mentioned above. To see and capture "reality," they had to invert both the conventions of what and how is worth photographing, and the aesthetics of good photography that call for reproducing the details, having full range of tones, and

minimizing film artifacts. But such inversions are not simply binary – because every art photographer (or a group of photographers working in one city and learning from each other) who successfully developed their own snapshot aesthetics went into a different and at least in some ways unique direction.

[The parts 2 and 3 of this chapter present analysis of *professional* and *designed photo* types on Instagram. They will appear on manovich.net during February-March 2016.]