

# Bridging the affective gap to make news felt: Spaces of aestheticized public voice

**Martin Brynskov**

Center for Digital Urban Living

Aarhus University

brynskov@imv.au.dk

**Tuck Wah Leong**

Culture Lab

Newcastle University

tuck.leong@ncl.ac.uk

**Jonas Fritsch**

Center for Digital Urban Living

Aarhus University

jonas.fritsch@gmail.com

## ABSTRACT

We report our experiences of how public voice, news reporting, and sensor information can be blended and mediated digitally in ways different from the traditional formats of civic debate. We use *Klimatrends (Climate Trends)*, an iPhone app and related infrastructure, as a probe to understand how citizens, journalists, and other stakeholders can engage in conversations and reflections on an important topic or event understood as a space for aestheticized public voice. By attempting to make news “felt” through bridging an “affective gap” between readers/consumers and news/information providers we offer a tentative design strategy for public engagement with civic debate.

## Keywords

Civic engagement, community media, digital news, affective gap, felt news

## INTRODUCTION

Digital technologies have created profound changes in civic communication. From news websites and citizen services, over social networking services and microblogging, to crowdsourcing of news reporting by citizen journalists and political action orchestrated through digital means, the constraints of print and electronic mass media are being transcended by digital platforms. And as the old ways of organization around traditional means of distribution and communication change, so does the relationship between the curators of these non-digital platforms, journalists, and their audience and co-curators.

However, we are only now starting to see what happens when, literally, every person on the planet is given a “digital voice”. Mobile phones, the first personal mass medium, have become the most ubiquitous communication platform in existence, with more than 4 billion active users for around 7 billion people, a penetration rate of well over 50% – in comparison, the daily print newspaper circulation is around 450 million [1]. The internet, with its solidifying appearance as a coherent digital layer of information exchange, is the big ocean where all connections meet.

In other words, we are approaching a state where every person has a digital “voice”. But while the sheer quantity of technological means and availability of access to contribute one’s voice and participate in public debate is undisputed,

the notion of voice in civic communication is another matter entirely.

First we need to consider the definition of “voice”, since the term may mean many different things. Aristotle, in his *Theory of Civic Discourse* [2], distinguished between voice and speech, which in contemporary understanding points to the notions of voice as *sound* versus voice as *expression* of (political) opinion. Couldry [6] calls for another distinction: voice as a *process* versus voice as a *value*. The underlying argument Couldry sets out is that in order for public voice to be meaningful, a society must place value in public voice as a process, a process that takes time and effort. Here lies a grand challenge: With ever more communication and information channels available to us at all times comes the problem of fragmentation. Thus the convenience of short messages and sleek commercial platforms may in fact erode the foundation of *effective* public voice. This is also a paradox, because the large and dynamic networks to which we are all linked may also be harnessed to wield immense power.

Couldry’s complaint is with what he calls the neoliberal devaluation of voice [6] – an issue similar to the concerns raised in the context of Japanese mobile culture as “wealthy yet impoverished” [20], referring to the broad range of mobile services that are available (high quantity), while at the same time only facilitating very limited room for public debate (low quality). Others point to “secondary literacy” to characterize the fragmented communication, epitomized in e.g. SMS (text messaging), Facebook, and Twitter. Konrad [13] defines secondary literacy as “an epoch which is characterized by the rationality of literacy, but allows for multimodal enhancement due to changes in communications technology.” This fragmentation is often taken as a threat to writing and print culture, which are seen as fundamental to a thoughtful, rational, and (in Couldry’s terms) effective process of public voice. As Baron [3] formulates her concern with a question: “Is ‘speed writing’ an oxymoron?”

The challenges facing publishers of printed newspapers are closely tied to these concerns, because if the new digital platforms are not economically sustainable to the same extent as the print business was previously, it does not bode well for the curated forum for public voice that they represent.

How the balance should be between “free information” and “curated content”, and what forces – commercially, politically, and socially – should govern the interplay between them is heavily dependent on another aspect: cultural context. Different cultures value different ways to facilitate and mediate public voice. At the moment we are experiencing the notion of the “free” (as in libre) internet being challenged in various ways: walled commercial gardens (e.g. Apple’s App Store), network neutrality [21], and censorship (e.g. WikiLeaks in the West, Google in China) to name a few. And at the same time, it is becoming increasingly difficult to point out the “right” values to enforce.

It is with this complex situation as a backdrop that we address the challenge of how to support public voice with-and-through the use of digital technologies. It is not our intention to advocate or point to a direction based on some moral compass and to offer a suggested solution towards its implementation. Rather, what we strive to do in this paper is to develop a space, a system, a platform, a probe with these challenges in mind to see if we can learn more about how to accommodate for voice by using a range of design strategies that are specific to and yet quite different from traditional genres within journalism and social media. Not by re-installing print culture, but by using affective strategies to counter some of the challenges of secondary literacy in order to understand its potential in relation to civic communication.

The rest of the paper will be structured as follows: In the next section we will give a brief background for our work and describe the civic debate topic we use to couch this investigation: the 2009 United Nations Climate Change Conference (COP15) held in Copenhagen, Denmark. Then we will introduce the concepts of “felt news” and the “affective gap”. With those concepts and COP15 in mind, we then describe the rationale behind the design of a digital platform, including an iPhone app, *Klimatrends (Climate Trends)*, and the opportunities we have pursued, followed by a description of the design itself and the surrounding technological infrastructure. Then we present an initial analysis and evaluation of the system and in doing so provide a characterization of the system and the design strategies it represents. We finish off by discussing our results in relation to the larger concern outlined in the introduction and point to further work.

## BACKGROUND

Climate change is seen by many as an important topic, but it is also a theme that has been somewhat exhausted, at least in Denmark leading up to the UN climate conference COP15 in Copenhagen in 2009. As a result, there is a relative lack of public interest to engage in a debate over this otherwise important topic. This clearly represents a challenge for society. Thus while the debate is important the public is not as engaged as they should/could be.

We, as part of an established research partnership in a national research center, interaction designers, journalist researchers, and a national media organization, decided to

take up this challenge and to explore the notion of “public voice”. The aim was to develop and test new platforms for news dissemination directed at topics of importance to the public debate. Given this partnership, and in light of the COP15 event, we approached our exploration by formulating the following question:

*How can we develop a news infrastructure using new digital devices and ways of communication to get people more engaged in the climate debate?*

The emphasis was on *how*, i.e. the success criterion was not necessarily a large impact in terms of number of users, but rather to understand the potential in doing things differently. We went about establishing this understanding through design, i.e., research through design [22], by creating an iPhone app to be used by people to engage with COP15.

Building to a large extent on our experiences gained from previous projects about civic communication in public space on the topic of climate change [5], the initial idea was to make the climate debate “felt” by people on a personal level, while still holding on to the idea of a collectively framed civic communication. In the resulting *Klimatrends* app, the aggregated “mood” of the users and other sources is condensed into an abstract visualization and soundscape which can be accessed and interacted with via the phone. There is an inherent incentive to make people contribute actively to the climate debate by inviting users to contribute with situated statements, news and mood indications.

## CONCEPTUAL FRAMING

Two guiding concepts were developed during the design process. They came to play an important role in the design work and offer directions for future experiments and explorations. These notions were *felt news* and the *affective gap*. Making news felt was identified as an overlying research interest pursued in the project whereas the affective gap was conceived to offer concrete focus points and design strategies concerned with specific means of engagement and areas of interest in the design process.

### Felt News

The notion of “felt news” was derived by McCarthy & Wright’s framework [16, 17] to understand people’s experiences when interacting with technology. They use the term “felt life” to draw attention to lived experience as embodied. Their approach argues against the notion that thoughts, ideas, and emotions are entities that can exist in an abstract way separate from our physical embodiment and separate from each other like different communication channels that do not interfere. Life is felt because we have continuous sensory, sensual, and intentional connection with our environment. This connection is situated in time and space and built up over time and space.

McCarthy & Wright drew heavily from Dewey’s pragmatism which described these dual facets of experience and the idea of felt life very well:

“... what men do and suffer, what they strive for, love, believe and endure, and also how men act and are acted upon, the ways in which they do and suffer, desire and enjoy, see, believe, imagine – in short, processes of experiencing. ... It is ‘double barreled’ in that it recognizes in its primary integrity no division between act and material, subject and object, but contains them both in an unanalyzed totality.”[7].

We conceive the notion of felt news as a potential concept that can help address the communicative challenge that surrounds the coverage of such a complex event as COP15 and a contested subject such as climate change. People are continuously being bombarded with information through a wide range of communication channels: newspapers, posters, the web, TV, friends’ opinions and so forth. In particular, when we take into consideration the amount of information that is involved, it is clear to see how it can be difficult for every stakeholder to relate to what can sometimes be very abstract and uncertain consequences of climate change, as well as make sense of the ambiguity of the direction of the negotiations that were taking place at COP15.

For us, felt news is a particular approach to creating a public forum for news that could potentially be meaningful to an individual and thus become a part of a person’s life in an engaging way. There is a great difference between reading about environmental issues in a way that is mere distraction and actually taking the content of the news into consideration. This might even have an affective impact on a person’s day-to-day perception of oneself in relation to the world one lives in, as well as influence the actions that one takes. One of the main questions, thus, is how we might enable felt news, and in doing so understand the relationship between information, affect, and engagement when interacting with felt news [8]. Central to these concerns was the idea that the technology involved might contribute to the felt-ness of the news. Finally, we were interested in the extent to which felt news could have the ability to influence personal agency, among other things by giving people a voice they felt would be heard in the debate.

### **Bridging the Affective Gap**

The notion of felt news in many ways revolves around the idea that there is some sort of gap between the news and the person reading them. To describe this and to move the research question into more palpable design strategies, the notion of the “affective gap” was conceived to describe the challenge of reading news and making them personally felt.

We take the concept of affect from Canadian philosopher Brian Massumi. Massumi builds on Spinoza to define affect as the pre-reflective and non-cognitive workings of experience. Affect is understood as a force and must be conceptualized in terms of the capacity to affect and be affected. This capacitation takes the form of either a heightened or diminished activation or capacitation of a body through experientially felt transitions [14]. Following Spinoza, Massumi argues that positive affects are those that make us feel alive and act in the world. Negative affects

have the opposite effect, reducing our possible activity in the world and making this reduction felt. According to Massumi, affect directly addresses forms of lived experience on a qualitatively different experiential level than that of emotions and feelings which can be seen as personalized or recognized affect [15].

Massumi uses the notion of a gap to underline what he terms the primacy of the affective [15]. He argues that this primacy is marked by a gap between *content* and *effect* which needs to be accounted for. Therefore this affective gap is between the semantic and semiotic qualities, understood as content, and the intensity, understood as effect.

We use the affective gap to describe the relationship between news and people in terms of whether the gap may be bridged to capacitate people to act in the world. Importantly, this affective gap is by no means “empty”. We are all living in a stream of constant information, and even though some information might be more important than other, it is increasingly difficult to tell the difference – not least because of the ways in which the different media are being used and news are being presented. The idea then was to address the observed affective gap between the news and the people reading them. This gap is over-filled with possible hooks of experience you may or may not cling onto. This can be understood as tendencies always on the verge of manifesting themselves, over-saturating our experience of the news as part of the world we live in.

We tentatively used the notion of “bridging” this qualitatively over-filled gap in an attempt to develop strategies to make the already existing affective overcrowding felt in a way that might make people want to actively explore and contribute to the climate debate. Bridging in this respect does not refer to any direct correspondence but rather to fostering productive conditions of emergence for an affective engagement. This could be pursued as a design ideal by investigating how the affective engagement could be aimed for on different experiential levels related to the development of Klimatrends. Therefore, we worked specifically with various design strategies to address different levels of affective engagement to possibly bridge the gap. These levels were identified in relation to the technology deployed, the communication infrastructure, ideals of civic engagement, and news in the optics of COP15. We identified at least six areas of interest: *visualization*, *interaction*, *contribution*, *content*, and *connection*. We sought to address these primarily via the design of the iPhone app.

*Visualization:* When considering how we could allow people to experience the app on the iPhone, we first considered various kinds of visual interface design. In the project we were working with 3D visuals as a core area of experimentation. Hence we sought to experiment with ways of creating an affectively engaging visual expression that would incorporate aesthetic values beyond pure representation. Further, the visual would have to also address the more-than visual by incorporating the built-in sensors as well as a soundscape.

*Interaction:* The interaction specifically concerned the bodily activation when interacting with the app, how to use the different sensors in the iPhone and above all what possibilities they offered for creating means of affective engagement.

*Contribution:* It was important to make it clear through the design how people could possibly contribute to what was being expressed in the app and the social space around it. Further, bringing visualization and interaction together, we wanted to make these contributions felt both for the single user, and for all users. It was the goal to use the feeling of activation to ultimately change people's capacitation from passive to active. This meant giving the users of the app the possibility to act in the climate debate.

*Content:* The content that was to be presented and produced would have an important impact on whether people would continue to engage with the app. Besides allowing people to contribute their own content, there would also have to be some sort of editorial contribution. Importantly, the content part is closely tied to its expression, visually, as well as through the interaction.

*Connection:* Ultimately, the app would be able to let users connect more to the news about COP15 but possibly also to facilitate the connection between users. This would potentially allow for new relations to develop in the form of groups or communities that in turn could influence people's engagement with news in their everyday lives and on an everyday basis.

These strategies are not by any means exhaustive, but nonetheless help guide the design process as concrete attempts to integrate affective concerns into the design of the app. The notion of the affective gap and the areas of interest offered to us in the design team points to emphasis and strategies that were taken into consideration in the process leading to the final design of the system. Specifically, we also asked ourselves in the design team what the implications might be for journalism if we were able to bridge the affective gap through the interaction with digital news and stories.

Working with the concepts of felt news and the affective gap led to a range of design considerations that became an integrated part of the discussions and conceptual developments throughout the design process. They also sensitized the design sessions directed at more material and technical experiments with the look and feel of and interaction with the interface.

We shall return to these strategies later, but let us first look briefly at some other systems within the field of civic communication and digital technology before we describe the actual design.

## **DIGITAL TECHNOLOGY AND CIVIC ENGAGEMENT**

There is a vast tradition of using new media in more or less artistic ways to stir, promote, and facilitate public debate. However, mainstream media are less often experimenting with new formats that focus on the experience because they

are so focused on a steady relationship with their audience and business partners (media agencies and advertisers). There are exceptions, though, e.g. the genre newsgames [4] where a current topic is being used as a theme in a usually quite simple casual game or simulation.

There are also numerous projects based on data-visualization of news and Twitter messages, e.g. *Pulse of the Nation* [18] which infers the "mood" in the United States throughout the day, and *We Feel Fine* [10], but they are not tied to a specific topic, nor do they have a special role for professional journalists to play. Another, more topical service, is The Guardian's World Cup 2010 Twitter "replay" of football (soccer) matches created as an animated visualization of tweets sent during the match [9].

In general, there is a natural trend in the media towards experimenting with new formats based on web mash-ups and data visualization (map overlays, infographics, Twitter walls), but rarely do they aspire to constitute a space for public debate that goes beyond a single platform. It is both the actual platform and the intent that we are concerned with.

### **Rationale and opportunities**

As part of the initial design briefings, the design team worked with broadening the basic research question with additional topics that needed to be considered:

- If affecting is about activating people, how can you make people's capacity to change (their habits etc.) felt? What is required from the interaction and the content to make this happen?
- Where does the change in relation happen – the digital layering changes one's perception of the city, the technology, oneself – but how?
- How can you present content in affectively engaging ways (visuals beyond the visual, situatedness of the content, personalized content)?
- How can you design for engagement whereby you provide people with scaffolds through which they can create meaning and experiences for themselves in a dialogical and relational way? This is related to McCarthy & Wright's [17] proposal of a dialogical design.
- Taking engagement and the idea of making things relevant and interesting, is it then possible to come up with design guidelines for affective interactions?
- How can you make people feel they can make a difference?

Posing questions such as these throughout the process, the design strategies were turned into concrete inspirations for design decisions.

### **Why iPhone, why app?**

We chose to create a native application (app) for Apple's iPhones mainly for two reasons: (1) It had significant 3D capabilities and touch interaction so that we could make an interesting and different interface, and (2) iPhone users are used to installing apps which together with the app store

gave us a streamlined distribution channel. By targeting the iPhone we would have the potential to reach a significant audience, and our experiences could be generalized to other similar platforms. Android and Android Market was not yet a significant platform by December 2009.

It was clear that we had to build a native app. Although there are many more touch-enabled websites than there are apps for the iPhone, and though building a so-called web app, e.g. essentially a website running as an app through the phone's browser, was a possibility, the kind of interaction we wanted could only be achieved in a native app.

#### **App as a probe**

Besides providing the core functionalities, i.e., a means for people to use their iPhones to interact with COP15 news, the Klimatrends app also served as a research probe. This is akin to how some probes are used to gather information, e.g., technology probes [11]. In this capacity, the app as a probe serves as a tool whereby we can get at people's experience of felt news during-and-through use. This in turn can reveal something about people's engagement with the COP15 debate. On the most basic level, people's interactions could also be logged, such as, how they used it, how often they used it, when it was used, what they posted, via the app and so on. Through this, we get glimpses into people's experience of both the app as well as the feltness of news. Of course, when this probe is used in conjunction with other tools such as diary methods and interviews, we can strive towards a richer set of data concerning people's experiences.

#### **KLIMATRENDS APP DESIGN**

The final Klimatrends app [12] was designed to provide people with a different and innovative way to keep up with news, opinion, sensor readings, and emotions before, during and after the COP15 event. While the basic interaction is based on Twitter, i.e., people can read or create tweets about COP15, Klimatrends is more than that. Its design included characteristics of other digital tools such as a social networking service, a measuring apparatus, and even a game. Thus when creating a tweet about COP15 using Klimatrends, by adding #jpklima in a tweet, the person could also influence other users' perception of the climate debate, both within the app and through other Twitter clients.

When you open the Klimatrends app and get past the title screen (Figure 1 A, below), you will see an ocean that is filled with ice floes floating on the ocean surface. Depending on how you hold it, you will either see it from the side (Figure 1 B) or from above (Figure 1C). The user is also greeted by the sound of a soft breeze and a smooth physical 3D simulation of ice floe on the ocean's waves. Every floe on the screen represents a message that has been sent to the system. The message can originate from another user, a news website, or a CO<sub>2</sub> sensor placed in the city of Copenhagen. The outline color of a floe is defined by its origin. Every user (or other entity) is assigned a unique color.

Whenever new messages are received by Klimatrends, they materialize as ice floes and emerge from the bottom of the ocean onto the surface (Figure 1 B). As such the ice floes that floats up to the surface can be opinions by other users, articles posted by journalists, and readings from actual CO<sub>2</sub> sensors located around in the city. You can tap an ice floe to investigate it further. Tapping it turns the floe over and reveals the message (Figure 1 D). This includes a link to follow the "mood" of the originator, and if the message has embedded weblinks, the user can explore and read further in the built-in browser. It is possible to 'sink' particular ice floes thus making room for new floes. You can follow as many other users (or entities) as you wish (Figure 1 F). This allows users to easily keep track of how others think or feel about the climate debate, the progress of the conference, or whatever relation they have to the COP15 event. A user's "mood" or attitude is indicated by a horizontal line in the color of the corresponding user (Figure 1 B). The mood is derived from smileys, e.g. :- ) or :- ( ( , ranging from +5 (five happy mouths) to -5 (five sad mouths).

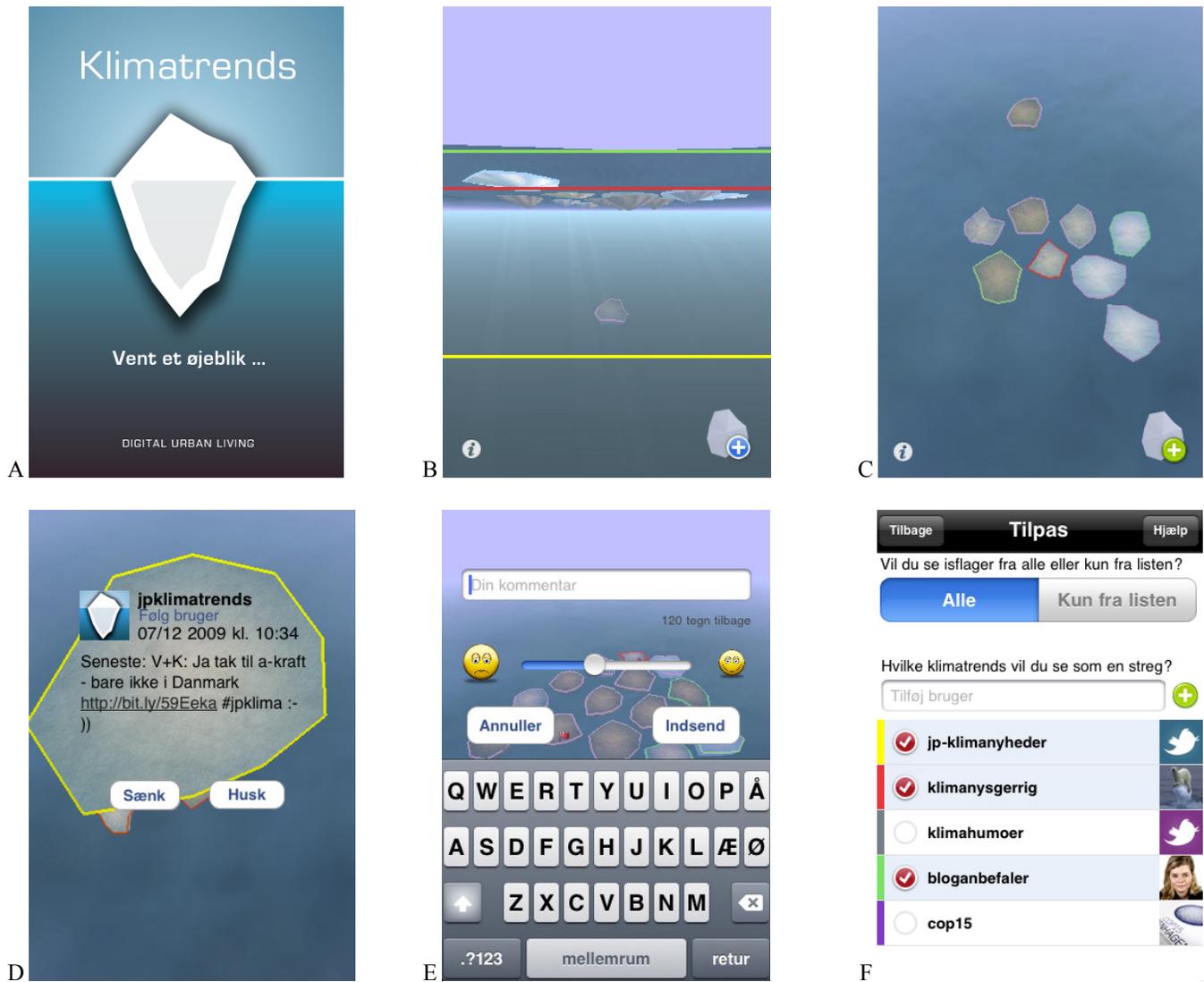
The app is designed to give an indication of the general mood of the climate debate in terms of whether an agreement will be made and what consequences that might have for the climate – assuming that is what the contributors in general are commenting on. If you tilt the phone to a vertical position, the perspective gradually shifts according to the movements. You seem to submerge into the water and observe the surface of the ocean from the side. The water level of the entire ocean, i.e. the surface seen from the side (not a colored line), represents a running average of the "mood" of all active users. The worse the mood, the higher the water level. If the water level rises, the mood becomes worse. The same goes for the individual lines: higher is worse (representing flooding).

The level is not an exact measure but a reflection of many impressions. If you want to contribute with your own commentary about the climate summit or other things, you can press the ice floe with the plus sign in the bottom right corner of the app (Figure 1 C). A text field appears (Figure 1 E) where you can write a short text message. Below the text field are two smiley icon. They enable you to indicate your mood along with the message.

New ice floes keep emerging from below (if you have not received them all, including the latest). You can also start afresh, i.e., clear the ocean of all its ice floes, by shaking the phone and allow a random selection of ice floes to emerge.

#### **Technology infrastructure**

As we mentioned earlier, all messages are sent via Twitter. In this respect, Klimatrends functions as a micro blogging service for the exchange of short text messages. To every message it is possible to add a tag (#jpklima), which makes it possible for a server at the university to filter the messages. Similarly, all messages sent in the app also appear on Twitter. Technically, then, Klimatrends consists of an app with a background service in the form of a server gathering relevant information that can be presented to the user. Any-



**Figure 1.** Screenshots from the iPhone app *Klimatrends*. (A) splashscreen; (B) vertical position, showing three “mood” lines and a rising ice floe, representing a new message; (C) horizontal position, ice floes may be tapped and “opened”; (D) open message with sender name, follow link (“Følg bruger”), textual smiley; (E) new message, with mood selector; (F) list of people being followed, check marks indicate “show mood level”.

body using Twitter can be connected to *Klimatrends*. This includes any website or service that can be configured to automatically send Twitter messages tagged with #jpklima, e.g. whenever there is breaking news. In this way, it is also possible to configure the CO<sub>2</sub> sensors in the city to send their level readings to the app via a mobile WLAN connection. We configured the sensor data integration using the web-service Pachube [19]. Sensors were set up to tweet the CO<sub>2</sub> level if there was a significant change over a period of 6 hours. The thresholds were tweaked in order to avoid flooding of tweets from the sensors.

## RESULTS

During COP15, the app was downloaded 350 times and received a rating of 3.5 from 53 users. For some time around COP15 it was ranked third on the list of most downloaded apps in the News category in the Danish Apple App Store. This tells us that it doesn’t take that large numbers of

downloads for an app to be visible in the category free news apps (at least not at the time). But it also says something about what measure of attention and demand you can expect for an iPhone app in this category.

In the period December 5 to 21, 57 different senders were identified with the #jpklima Twitter tag. 37 of these also used the smileys to attach a mood. The total number of messages was 949, with the highest frequency of messages centered around the beginning (61 messages per day) and end of COP15 (71 messages per day). The general user activity was measured by server traffic generated by the app when it was open, messages being a particular case of activity contributing to the traffic. The CO<sub>2</sub> sensors auto-generated tweets every 6 hours (or longer) were a minor contribution compared to the messages generated by people.

The activity and number of messages largely followed each other (Figure 2, lines A & C), but interestingly, the opening had relatively more activity in relation to the number of messages than the end had. This means that initially there were relatively more people just looking in without partaking, while by the end of COP15, more users expressed themselves, although there was less general activity.

One interpretation could be that some users got used to partake in the debate and became more active, while others became accustomed to simply follow. In terms of voice and public debate, it could indicate that the perceived quality of the interaction grew over time.

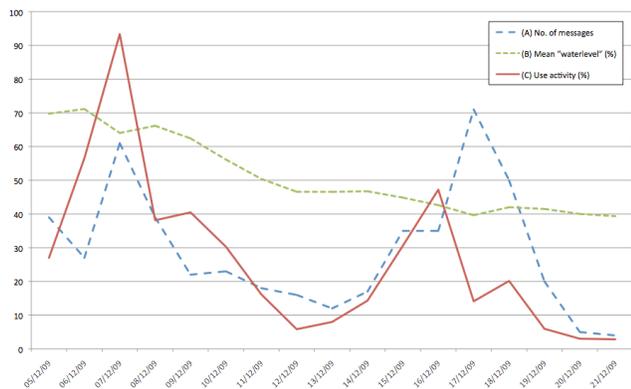
The general attitude or mood, symbolized by the water level on the Klimatrends app, went from being uniformly negative (~70) in the beginning, neutral (50) mid-way to slightly positive (~40) towards the end (Figure 2, line B). Again, lower water level indicates a positive “mood”.

Looking at individual users’ “mood” (Figure 3), a pattern emerges showing fluctuations in the first half of the period, while there is greater stability in the assessments in the second half. This can be taken as an indication that users experiment more with happy and sad smileys in the beginning.

It is not possible, based on these figures, to get much closer to the users’ thoughts and motives that underlie these expressions, but as we point out later, we do have qualitative data that would allow for a deeper analysis based on diary entries, activities, and interviews. However, this is outside the scope of the current paper. Thus in the following, we have only included user feedback concerning the overall functioning of the system in order to be able to differentiate between what is perceived as trivial usability issues and the features of Klimatrends that exemplify the design strategies.

### ANALYSIS AND INITIAL EVALUATION

The digital technology deployed in Klimatrends becomes a way to aggregate information and present it in an engaging way when compared to traditional media forms. Overall, the infrastructure seeks to offer people ways to contribute



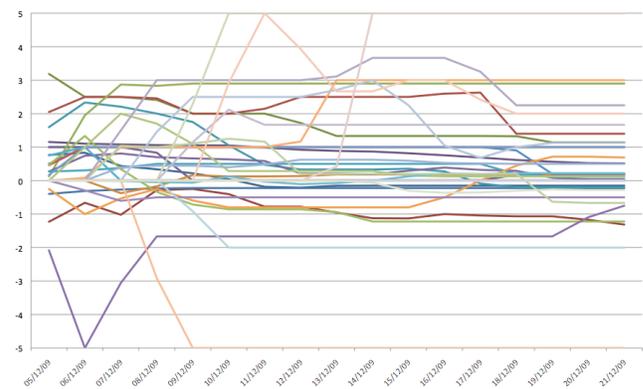
**Figure 2.** Overall trends. This graph shows (A) the number of messages sent per day, (B) the mean “water level” (50 is neutral, <50 is positive attitude), and (C) the use activity (how much traffic in terms of requests the app generated). The largest activity was seen by the beginning and end of COP15. The positive trend (B) indicates optimism towards the end.

in real-time to both the general mood and specific discussions expressed through the system. Even though Klimatrends has been targeted at a special event, COP15, the app might find value in an everyday perspective concerned with aggregating and presenting different kinds of moods.

However, it is also clear that the final app only to a certain degree met the many affective aims and concerns identified throughout the process. Although the app did create conditions of emergence for capacitation understood as felt relations through the interaction with the app, many users have commented on a range of features that might make them less likely to keep using the app due to lack of engagement. Primarily, it seems the idea of connecting to other people did not work. People were missing the functionality related to commenting on the messages they found interesting, which made it difficult to create links between users, in a community sense. The idea of different experiential layers or different levels of engagement was only realized to a certain degree in the final app. In general, it seems the visual and interactional expressions only to some extent created an incentive for sustained affective engagement.

The areas of interest presented as part of the affective gap can function to both evaluate the existing and point out possibilities for future designs.

Visually, it might be argued that the metaphor used in the end was conceived as being somewhat banal and did not offer sufficient depth of expression. At the same time, it is still possible to explore more sensorial possibilities with the iPhone. A recurring reaction from users was that the interface was intriguing in its game-likeness and satisfying to explore, but over time it became tedious, e.g. compared to following the conversation from a standard Twitter client. This initial interest could be seen as a sign of an ephemeral quality of the app, the simple delight in something new. But while an app like Klimatrends is a mash-up, it is a fixed mash-up, so this quality loses its power. If the visuals could be exchanged much more easily, then the interface could be



**Figure 3.** Individual trends. This graph shows the individual “water level” indicating the attitude of the most active users (from +5 to -5). The largest changes are seen during the beginning of COP15.

re-used in other situations by a new group of people.

This leads to the *interactional* aspect. The final app mostly uses ordinary touch gestures. In addition, you tilt the phone to see the aggregated water level and shake to get new ice floes. However, the interaction could be further enhanced to keep a sustained engagement with the app. It remains clear, though, that there is a great potential in experimenting with the interfacial and interactional possibilities of the iPhone platform to also create non-gaming environments that might affectively engage people in the exploration of a given content. As with the visuals, the rigidity of the current app platform diminishes the appeal of the interaction over time. If the platform were to allow users or designers to combine interface and interaction elements at a more ad hoc manner that would probably release the interactional potential in non-instrumental interfaces like Klimatrends.

In terms of *contributions*, people were able to post messages and mood states which were then represented in the app. This was relatively straightforward and it would be interesting to make it even more obvious how this was registered in the system, either through some kind of history, traces or the like. Further, it would be crucial to actually explore other areas than the app where this contribution was felt. Many of the complaints with the system were related to known features that users were familiar with in social media platforms like Twitter and Facebook. There was no “like” feature, and no reply, threading, or other means of organized conversation. On the other hand, the users seemed to recognize the limitations of Klimatrends as an experimental, vertical prototype and an exemplar of a very specific interest in providing a different space for public voice. In this light, the fact that the message-to-activity ratio grew over time could indicate that the contributions did have an appeal even in this truncated social medium. On a related note, we would like to suggest that it is inherently difficult to build social spaces, even more so around important topics where a social forum has not already been formed. This was indeed the original motivation to create Klimatrends: To get people to talk about climate change even though it was hard.

In terms of *content*, it seems that the app did not foster new ways of contributing content; it was mostly in the form of tweets and the like. It would have been highly interesting to actually be able to contribute pictures, videos, location-based information and the like to the app so people could actively pursue the origin of the content-production, for instance. It should also be noted that text on the iPhone might not be the best and at least not the only way of presenting content. As for critical journalism, there is still much to be explored. Another interesting path might be contributing your own daily CO<sub>2</sub> consumption via different sensors, GPS tracking of movement and the like. So again, the app seems conservative, but the structure is in itself open to all kinds of data sources and output formats.

Finally, the app did not sufficiently succeed in creating *connections*. It was possible to see other people, other floes,

but not possible to connect with the content presented. You were able to follow users, but this was hardly enough to keep a sustained engagement. The idea of different levels of attachment (individual, group, public) still needs to be further explored. Basically, the issues here are on the same level as with the contributions. Users miss the extended feature sets of Twitter and Facebook that offer much more detailed sharing controls.

The notion of the affective gap presents an approach to introducing particular design strategies in the development process. Here it is being used to emphasize different areas of interest for working with the creation of an affectively engaging application, both immediately and in the long term. As shown in this analysis, a range of the ideals presented in the different areas of interest did not reach a sufficient degree of satisfaction in the final design. However, these affective areas of interest did have an impact on the final design which to some extent can be understood in affective terms.

## DISCUSSION AND FUTURE WORK

While it is difficult to make a very concise evaluation of Klimatrends with regard to all the affective aspects and design strategies, we take it as an exemplar of such a system. Based on our experiences with it we can condense its features in a definition that captures the qualities we try to manifest.

Let us recapitulate. The purpose of the system was to answer the following question:

*How can we develop a news infrastructure using new digital devices and ways of communication to get people more engaged in the climate debate?*

This question should be seen in connection to the challenges posed by secondary literacy on public debate, hinting at the qualities of the process of voice that is claimed to be embedded in print culture. But in order to reach our goal, the system should not necessarily aim to mimic or reinstate writing as in the notion of traditional literacy. Rather, it should aim to afford its users to perceive – both instantly and in the long run – the system as constituting an effective (in Couldry’s term) space for public voices using affective strategies. Furthermore, it should involve professional (or dedicated) curators or editors. And finally, it should allow users to concentrate on a limited set of topics.

Such a system is not just a blog or news website, it is not just a social networking service or forum. It is a constellation of interactive, curated content, distributed in physical and digital space, which uses a visualization (and possibly sonification) of digital expressions and social connections in order to establish a different, affective relation between the users and a topic. By this definition, such a type of public space could resemble an art installation more than an environment for civic communication. But there is an important difference: Systems like Klimatrends are not made with the intention of being art. They are public spaces. We could call them “spaces of aestheticized public voice”.

As an iPhone app with a fixed design, Klimatrends represents a very limited instance of such a space of aestheticized public voice. And as such, it doesn't seem very relevant to mainstream news organizations. But if we extrapolate the features it has to a much more flexible platform where users can choose easily from sources, topic filters, and visualizations, then its character stands clearer, as less information-oriented but in some ways more focused relation to a topic. That might become relevant in an ever more digitized and connected society where ubiquitous computing provides ample opportunity for more felt engagement which could fit the need to overcome the information overload.

In a follow-up study, we will dig deeper into the qualitative data we have collected through the probe study, diaries, and interviews. Such an analysis would allow us to be more specific about the users' perceived qualities of Klimatrends in relation to the affective strategies we have formulated.

We have already begun another ambitious project where we pursue some of the same qualities but with the balance a bit more towards the traditional information perspective than the aestheticized. Publishing Denmark's first iPad magazine with original content, we have created a series of experimental formats that explore how the tablet form factor invites other ways of engaging with thematic journalism.

## CONCLUSIONS

The idea of bridging the affective gap and making news felt has only been realized to some extent with Klimatrends. Rather than bridging the gap, the app can in some ways be argued to have widened or highlighted the dynamics of the gap by making it felt; the gap rather than the news is actually felt through the interaction. Instead of creating relations between people, the app has highlighted the relational complexity feeding into the aggregation of the mood presented in the app. Seeing the aggregated water levels and following the different tweets adds to the polyvocality of the climate debate rather than present any clear interpretation to connect with. The app offers a somewhat arbitrary and non-decodable expression. However, there is a chance that this felt relational complexity might in fact give people a feeling that the interaction of other people also means something for them personally; feeling that you have got your own voice in relation to multiple voices is a start. In its current form, though, the community does not arise between participants; the community is aggregated and arises in the system behind the app.

The notions of felt news and an affective gap relate to the idea of a public voice as ways to create an open and situated platform for participation and exploration. One of the challenges lies in accounting for the use of Klimatrends as a space of aestheticized public voice while at the same time offering an opportunity for continued depth of engagement.

As a contribution to the ongoing exploration of new interfaces and new experiential strategies for civic communication, we have proposed spaces for aestheticized public voice as a mode that we see as a potentially quite common

way of engaging with news in a not so distant future with more flexible frameworks for user-definable content-aggregation, visualization, and interaction.

## ACKNOWLEDGMENTS

We would like to thank the many colleagues and partners who contributed to the development of Klimatrends, especially the The Danish School of Media and Journalism, The Alexandra Institute, and CAVI. This research has been funded by the Danish Council for Strategic Research, 09-063245, (Digital Urban Living), and EU Regional Fund/Ebst.dk grant 08-0018.

## REFERENCES

1. Ahonen, T. *Tomi Ahonen Almanac 2011: Mobile Telecoms Industry Review*. TomiAhonen Consulting, Hong Kong, 2011.
2. Aristotle *On Rhetoric: A Theory of Civic Discourse (Book III)* (trans. Kennedy, G.A.). Oxford University Press, 1991 (322 BCE).
3. Baron, N. Gresham's Ghost: Challenges to Written Culture, in *Always On: Language in an Online and Mobile World*, Oxford University Press, 2008, 186-212.
4. Bogost, I., Ferrari, S. and Schweizer, B. *Newsgames: Journalism at play*. MIT Press, 2010.
5. Brynskov, M., Dalsgaard, P., Ebsen, T., Fritsch, J., Halskov, K. and Nielsen, R., Staging Urban Interactions with Media Façades, in *Interact 2009* (2009), Springer Verlag, 154-167.
6. Couldry, N. *Why Voice Matters*. Sage, London, 2010.
7. Dewey, J. *Experience and Nature*. Dover, New York, 1958.
8. Fritsch, J. and Brynskov, M. Between Experience, Affect, and Information (Chapter 7), in Foth, M., Forlano, L., Satchell, C. and Gibbs, M. eds. *From Social Butterfly to Engaged Citizen*, MIT Press, In press.
9. Guardian, *World Cup 2010 Twitter Replay*, 2010, <http://www.guardian.co.uk/football/world-cup-match-replay>.
10. Harris, J. and Kamvar, S., *We Feel Fine*, 2005-, [www.wefeelfine.org](http://www.wefeelfine.org).
11. Hutchinson, H., Mackay, W., Westerlund, B., Bederson, B., Druin, A., Plaisant, C., Beaudouin-Lafon, M., Conversy, S., Evans, H., Hansen, H., Roussel, N. and Eiderbäck, B., Technology Probes: Inspiring Design For and With Families, in *Proc. of CHI* (2003), 17-24.
12. Klimatrends (available in Apple App Store), 2009, <http://itunes.apple.com/dk/app/klimatrends/id340833857>.
13. Kondor, Z. *Embedded Thinking: Multimedia and the New Rationality*. Peter Lang, 2008.
14. Massumi, B., *On Microperceptions and Micropolitics (Interview with Brian Massumi)* [www.inflexions.org](http://www.inflexions.org), 2009.
15. Massumi, B. *Parables for the Virtual: Movement, Affect, Sensation*. Duke University Press, 2002.
16. McCarthy, J. and Wright, P. Putting 'felt-life' at the centre of human-computer interaction. *Cognition, Technology & Work*, 7 (4), 262-271, 2005.

17. McCarthy, J. and Wright, P. *Technology as Experience*. MIT Press, 2004.
18. Mislove, A., Lehmann, S., Ahn, Y.-Y., Onnela, J.-P. and Rosenquist, J.N., *Pulse of the Nation: U.S. Mood Throughout the Day inferred from Twitter*, 2010, <http://www.ccs.neu.edu/home/amislove/twittermood/>.
19. Pachube, [www.pachube.com](http://www.pachube.com).
20. Sunaga, T., Hori, K., Nishimura, T. and Mizukoshi, S., *The "media Exprimo" project: New Horizons in Citizen Media Expression and Information Design*, 2007, <http://www.mediaexprimo.jp/english>.
21. Wikipedia, *Network neutrality*, [http://en.wikipedia.org/wiki/Network\\_neutrality](http://en.wikipedia.org/wiki/Network_neutrality).
22. Zimmerman, J., Forlizzi, J. and Evenson, S., Research through design as a method for interaction design research in HCI, in *CHI 2007* (2007), ACM Press, 493-502.