Join.Love: A Sociotechnical Genealogy of the Legalization of Same-Sex Marriage

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ABSTRACT

HCI researchers interested in enhancing democracy have introduced methods and technologies that support democratic political processes, such as voting, and more broadly on empowering people to more fully participate in an increasingly technologized world. The aspiration for technologies to support meaningful democratic outcomes is not misplaced. In 2019, headlines around the world announced that Taiwan had become the first Asian country to legalize same-sex marriage, an impressive political achievement. But it was also an impressive technical achievement, the outcome of a concerted effort to develop responsive and impactful direct democracy platforms. We offer a sociotechnical genealogy of the process, informed by theory of deliberative democracy. We identify three opportunities for future HCI contributions: supporting less visible consensuses, developing civic journeys, and engaging in deliberative experience design.

Author Keywords

Deliberative democracy; same-sex marriage; sociotechnical ecology; citizen journeys; deliberative experience design

CSS Concepts

• **Human-centered computing~Human computer interaction (HCI)**

INTRODUCTION

HCI research has been seeking to incorporate political concerns into the design of information technologies, linking democracy, citizen participation, and computing technologies [17][20][23][24]. Specifically, HCI research has sought to provide platforms and tools that enable people to act on societal problems [13][15][20][24][31][39], by means of a variety of technology-supported democratic practices such as citizen engagement in public life [1][12][37][43] as well as public participation in broader political activities, such as governance, voting, elections, lobbying, resilience, and protesting [6][17][30][35][44][51][52].

Those developing and testing open government platforms throughout the world (e.g., [2]) can be seen as fellow travelers whose work can inform HCI. This paper offers a sociotechnical genealogy of one such effort, in which Taiwan's government and IT communities have recently implemented a direct democracy sociotechnical ecology premised on ideas of open government and e-government. This ecology has rapidly shifted how Taiwanese people govern themselves, and one of the highest profile outcomes of Taiwan's efforts at direct democracy has been the legalization of same-sex marriage, a notable political achievement given that Taiwan was the first country in Asia to do so.

As part of its contribution to democratizing efforts in HCI, this paper offers a reconstructed timeline of the process that led to the eventual legalization of same-sex marriage in Taiwan. This research integrates the following three sources:

- The *sociotechnical ecology* used, understood using contemporary notions of "channels" and "touchpoints" as the concrete locations of exchange and value creation.
- The content of the *deliberations*, that is the arguments, expressions, votes, decisions, and other manifestations of participants seeking to shape the outcome.
- Theories of *deliberative democracy* and *user experience design*, which, though developed in separate domains for different purposes, both draw heavily on Dewey.

In other words, we hope to contribute to understandings of HCI's potential roles as a research field to supporting democracy today. We were intrigued to read, for example, the following call to arms:

most of the [world's] dominant communicative streams are commercially motivated and controlled, often pandering to and helping to shape people's fears, anxieties, antipathies, acquisitive greed, and materialistic self-identifications. Influencing the redirection of this dangerous misuse of worldwide human communicative potentials must be an important agenda item for proponents of deliberative democracy. [26]

Though written by political philosopher Judith Green and addressed to scholars like her, as HCI researchers we felt a certain responsibility for the state of affairs she describes. Many of HCI's design methods were developed for and are used in the technology companies she critiques. We wondered how HCI might better leverage its strengths in experience design, the construction of "journeys," and in surfacing people's needs in service of product and service discovery to support

deliberative democracy. Our genealogy offers granular insights linking designed communication channels and the deliberations that they support. Additionally, we note that political theory argues that democratic deliberation cannot be limited to narrowly rationalistic policy and justice considerations but instead must incorporate intersubjective and cultural backgrounds and ways of being: they help people connect to one another, develop intellectually and morally, and mitigate forms of coercion. We therefore account for uses of personal stories, sarcasm, humor, and similar forms of expression. One of our contributions is to argue that HCI is especially well positioned to support these experiential dimensions of deliberative democracy.

BACKGROUND

Here we briefly sketch out the theory of deliberative democracy, summarize democracy research in HCI, and introduce same-sex marriage and Taiwanese democracy.

Deliberative Democracy

The theory of deliberative democracy was developed in the 1970s and 80s [7] when globalization was diversifying formerly homogeneous societies. Tribal ways of life were no longer able to handle social conflicts, partly because actors increasingly had no shared point of view nor common absolute authority—religious or civic. This in turn required participants in democracies to engage others in political processes where assumptions about "the basic rights of man" or "God's will" could no longer be taken as givens, and any shared democratic norms instead would be *outcomes* of political engagement—a process that at its best implied intellectual and moral growth. Against such a backdrop, analyses of the formal structures of democracy and appeals to universalizing conceptions of democracy and human rights offered little guidance [13] [29][55]. Deliberative democracy was developed as an alternative. Its fundamental idea is that by promoting effective deliberation mechanisms and channels in the process of policy-making, people who will be affected by the policy can be involved in collective decision-making, which should enhance the democratic legitimacy [32][48].

In deliberative democracy, *deliberation* is an actual communicative process, as opposed to a hypothetical one. Hypothetical ones include the golden rule, Kant's categorical imperative, and Rawl's "veil of ignorance." In the golden rule, individuals do unto others as they would have done to themselves. Similarly, Kant's categorical imperatives are rules that apply in all situations, not just one. Rawl's "veil of ignorance" refers to a hypothetical scenario in which someone proposing a political system specifies all of the roles in that system but then imagines that he doesn't know which of those roles he will occupy [5]. Common to each of the hypothetical dialogues is that how one relates to another is specified without recourse to what that other actually says or wants—there is, in short, no discourse. Further, hypothetical dialogues exacerbate structural marginalization, because they speak for those, including the structurally marginal.

Deliberative democracy not only wants actual communications, but it also wants them to be authentic, avoiding coercion and mutual incomprehensibility. This requires a certain kind of discourse, John Dryzek explains: discourses

are shared means of making sense of the world embedded in language. Any discourse will always be grounded assumptions, judgments, contentions, dispositions, and capabilities. These shared terms of reference enable those who subscribe to a particular discourse to perceive and compile bits of sensory information into coherent stories or accounts that can be communicated in intersubjectively meaningful ways. Thus a discourse will generally revolve around a central storyline, containing opinions about both facts and values. [26]

The ability to engage in discourse depends on something more basic: communicative competence. Communicative competence entails a willingness to attribute to one's discursive partner sincerity, true beliefs, and so on—without which every utterance could be understood to mean practically anything [28]. Thus, combining discursive membership and communicative competence, deliberative democracy requires participants to engage in mutual respect, equality, reciprocity, mutual justification, the search for fairness, and the absence of coercive power [42].

Discursive membership is a source of conflict in pluralistic societies because multiple such discourses exist and cannot be reduced to one another (at least, not without violence). For example, one discourse might offer an overarching story that is religious in nature, in which the proper role of humans is to submit to divine law, while another might offer a secular story, in which the proper role of humans is to maximize their rationality or productivity; when these stories come into contact with one another, they offer no means of resolution. The idea of communicative competence introduces a practical basis upon which it is possible to communicate across discourses. For example, when the backgrounds and norms held by one discourse come into contact with those of another, a given discourse's norms and backgrounds become challenged, and when they are, they must either be defended or changed. Values of respect, mutual justification, and fairness are crucial. This process can lead to a clarification of issues, the development of compromises, consensus building, and ultimately the legitimation of certain majoritarian acts.

Deliberative democracy thus includes several core principles. One is that the quality of the process matters, as it forms the basis of any legitimacy of political outcomes [7][13][27][48]. All stakeholders should participate; that is, all citizens are invited and encouraged to exchange arguments and consider different viewpoints [55]. This means that a deliberative democracy must proactively craft institutional structures and channels to ensure that those who are structurally marginalized can be heard [5]. Finally, Deliberative democracy is not based on a competition between conflicting interests but on an exchange of information and justifications supporting varying perspectives for the public

good [7][27][32][42][48][55]; ideally, all participants are changed through their participation in the process.

However, critics of deliberative democracy have noted that deliberative democracy often falls short of its own goals. They offer the following criticisms. Critics from the left argue that deliberative democracy unfolds in and across institutions where the subtle and pervasive effects of hegemony are stronger than discursive practices that seek to include marginalized voices [61]. From the right comes a critique that those same discursive rules produce "windy" citizens, who "must always be open to persuasion, forever preparing to act, but never acting" [25].

Democracy Research in HCI
Supporting democracy has been a long-running agenda in HCI, and since democracy has many different forms (e.g., direct democracy, participatory democracy, counter-publics democracy, and deliberative democracy), the technologies and practices developed to support democracy widely vary [13]. One thread of research emphasizes technology-supported citizen engagement in small-scale decision-making in public life. Such engagement often focuses on democratic practices that are closely related to these citizens' mundane everyday experiences in local communities, such as cycling [1][37], swimming pool [12], and urban design [43].

Another thread of research highlights how technology facilitates public participation in broader political activities, such as governance, voting, elections, lobbying, resilience, and protesting. Examples include designing platforms for state elections and inviting residents to collectively reflect on ballot measures [35], ethnicity minorities' engagement in presidential elections through public online forums (e.g., Reddit) [18], how citizens used social media for lobbying and impacting political outcomes [30], and designing political deliberation technology to support citizens' political interaction in online public sphere [51][52]. Many have explored technology-supported and/or advocated social movements as well, including abortion rights in North Ireland [47], Black Lives Matter (BLM) in the US [53], Arab Spring across North Africa and the Middle East [59], and resilience during the Iraq war [44].

Research has emphasized the so-called "privileged moments" such as national elections and massive protests [34], while others have shown emergent forms of civic engagement in everyday public lives. With some exceptions (e.g., [2][3]), many have focused on community-based and local democratic practices, as opposed to national-scale democratic movements and phenomena. Research that has focused on online deliberative democracy has noted the poor quality of online discourse [36], the difficulty in measuring deliberative progress [36], the lack of clear principles and guidelines to support the design of online deliberative forum [57][60], and the need for improved interdisciplinary collaborations, particularly between HCI and political science [45]. This research has collectively made a strong case for the need for stronger theory and practical guidance in the development of

sociotechnical systems, and where such systems are already in operation, provide empirical evidence beginning to elucidate relationships between sociotechnical system design decisions and deliberative outcomes.

One HCI contribution of this research is to propose the use of experience design as a perspective to pursue these issues. We note that both deliberative democracy and experience design rely heavily on Dewey, and for good reason: Dewey explicitly links his conceptions of democracy and experience:

democracy is a belief in the ability of human experience to generate the aims and methods by which further experience will grow in ordered richness [...] Since the process of experience is capable of being educative, faith in democracy is all one with faith in experience and education. [...] [W]hat is meant by experience in this connection [...] is that free interaction of individual human beings with surrounding conditions, especially the human surroundings, which develops and satisfies need and desire by increasing knowledge of things as they are. [14]

We explore several such links in what follows. One is that actual communication requires actual communication *channels*, where increasingly those channels are mediated by interactive technologies. We seen an opportunity, because HCI has considerable experience researching for and designing such channels, with an accompanying vocabulary (e.g., touchpoints, painpoints, journeys, stories) [50]. HCI's turn to experience nearly two decades ago recognized that information processing and rationality are not enough; human-computer interactions needed to be good experiences. Likewise, political theorists have argued that democratic processes cannot be limited to strictly rationalistic deliberations but require the full range of human engagements—greetings, relationship building, parody, humor, and so on [7][13][19][27][29]. In that, we see a strong alignment between a strength of HCI and a democratic need.

Taiwan, Democracy, and Same-Sex Marriage
Taiwan is a self-governed island that split from the rest of China in 1949 as a result of the Chinese civil war. In the late 1980s, it transitioned to a democratic government. Today, Taiwan's status is disputed, with the People's Republic of China (PRC) claiming it as a renegade province, and most of the world, including the United States and the United Nations, neither recognizing Taiwan as an independent country nor recognizing the PRC's claims of sovereignty. As a research team comprising individuals born in China, Taiwan, and the United States, we take no position on the political dispute, other than to recognize Taiwan's *de facto* status as a self-ruled democracy. We also recognize that the stakes are high for Taiwan's claim to being democratic. That it is a democracy is a key ideological reason that Taiwan continues to have U.S. support for its national defense. Taiwan's need to establish and demonstrate its democratic legitimacy is not only a matter of effective governance but also Taiwan's geopolitical alliances.

In May 2019, Taiwan became the first nation in Asia to legalize same-sex marriage. Importantly, the change happened democratically, requiring a period of years of highly contentious judicial and legislative challenges. As we document below, the movement to legalize same-sex marriage gained critical mass after a highly publicized suicide in 2015, leading to a judicial ruling in 2017, which set up a parliamentary fight and a national referendum, concluding with passage of a bill legalizing it in 2019. Throughout the process, sociotechnical systems developed to support open data/open government initiatives and e-government were used alongside of mainstream social media (YouTube, Facebook, etc.) to mobilize supporters and opponents of the movement. As a result, the legalization of same-sex marriage is one of Taiwan's signature democratic achievements (it garnered headlines around the globe), was shaped and made possible by the recent implementation of a diverse sociotechnical ecology in support of direct democracy, and as such is of interest to HCI researchers interested in supporting democracy.

Taiwan is also significant insofar as it is one of the few countries in the world and the first in Asia to actively experiment with deliberative democracy at the national level [10][11][32][40][56]. Since 2002, Taiwan has systematically prototyped and experimented with a variety of deliberative democracy mechanisms to make it possible for its citizens to take part in the official policy-making process [40][32]. Historically, Taiwan has also been a leader of LGBTQ rights in Asia. A 2014 poll showed that more than 65 percent of Taiwan people supported SSM rights [21]. Taipei is also among the most gay-friendly cities in Asia [21] and hosted Asia's largest annual pride celebration in October 2014. Public support notwithstanding, legalizing SSM was not on the government's agenda. Efforts to legalize SSM began in October 2013 when the bill for marriage equality passed the First Reading in the Eighth Legislative Yuan. However, this bill did not reach beyond the committee examination before the end of the legislators' term and was discontinued. It was not until late 2016, in the current Ninth Legislative Yuan, when the amendments to the Civil Code passed the First Reading in November and were referred to party caucuses for further negotiation in December of the same year.

What made the pursuit for SSM in Taiwan internationally known is the landmark ruling by the constitutional court of Judicial Yuan in Taiwan on May 24, 2017 that the civil law defining marriage as a union between a man and a woman violates the equal protection guaranteed by constitution (Judicial Yuan Interpretation 748) [33]. That case was initiated by gay rights activist Chi Chia-Wei, 59, who challenged the Taipei city government's rejection of his marriage application for him and his long-time partner in 2013. The 2017 ruling became a milestone of the victory of marriage equality not only in Taiwan but also in Asia. Yet while the ruling specified that current civil law violated equal protections, as a judicial ruling it obviously did not produce new legislation. The debate then moved to how to craft legislation that the public wanted and that complied with the ruling. Two broad

legislative strategies emerged. In one, marriage laws would be updated to allow same-sex partners, and all of the rights and responsibilities of marriage would thereby apply to these individuals, thus meeting the equal protection requirement; this is the strategy advocated for by the pro-SSM groups. In the other, new laws would be written that create a special category for same-sex partners granting them rights that meet the requirements of equal protections, while falling short of treating such unions as "marriages" in the eyes of the law; this is the strategy advocated for by the anti-SSM groups.

Ruling 748 also triggered resistance, protests, and campaigns from anti-LGBT groups throughout Taiwan. In February 2018, the Alliance for Next Generation's Happiness, a Christian right group proposed a referendum on the SSM issue in hopes of narrowing the scope of the legislation. Specifically, they proposed the following: "Restrict marriage under Civil Code to one man and woman"; "Do not include same-sex education in the Gender Equality Education Act"; and "Protect the rights of same-sex couples outside of the Civil Code." Meanwhile, in September 2018, pro-LGBT groups in Taiwan also collected enough signatures to submit their own proposals to the referendum. These included the following: "Protect same-sex marital rights" (i.e., recognize same-sex unions as "marriages"); and "Implement LGBT-friendly sex education as mandatory in schools."

Responding to all of this activity, a multi-proposal referendum was held on November 24, 2018 as part of Taiwan's national elections. The five above-mentioned proposals regarding LGBT rights, LGBT sex education, and same-sex marriage were all added to it. By now a high-profile political debate, campaigning was extensive through the summer and fall in traditional as well as new media. But in spite of the island's apparent support for LGBT, the three anti-LGBT proposals were approved by 72.48%, 67.44%, and 61.12% in favor, while the two pro-LGBT proposals were rejected, garnering only 32.74% and 34.01% support.

METHODOLOGY

We refer to our method as a sociotechnical genealogy, by which we mean a time-bound, critical-empirical account of a sociotechnically mediated phenomenon, in this case Taiwan's same-sex marriage (SSM) debate and policymaking. This mixed method approach involves both empirical and critical dimensions. The empirical aspects of the research grounded us in reality, with data collected from heterogenous sources plotted over time to provide an account of what happened, who said what and when, and what the contents and consequences were. The critical aspect of the research had us interpreting this data as manifestations of both deliberative democracy and of sociotechnical experience design.

Empirically, we collected four types of data. First, we collected data related to same sex marriage legislative proposals from Taiwan's direct civic participation platform "join.gov.tw" from 2015 to 2018. This included three government-initiated surveys regarding SSM, survey results, citizens' comments, as well as the government's responses to

the survey results. This also included all successful and un-successful pro- and anti-SSM citizen-initiated proposals on SSM posted on join.gov.tw as well as the government's official responses to them. All of this data is publicly available, as part of Taiwan's commitment to open government. Second, we followed 12 open Facebook groups related to LGBT rights and public policy making in Taiwan and collected posts and comments regarding efforts, practices, and debates to legalize SSM from 2015 to 2018. Third, we searched the websites of Taiwan LGBT activist groups and Legislative Yuan to collect SSM related documents, discussions, and publications. In the cases of Facebook groups and LGBT web sites, we directly engaged leaders of these groups in formal and informal conversations throughout this period. Fourth, we used Google searches to retrieve media coverage (e.g., blogs, news articles, and online videos) about SSM in Taiwan from 2015 to 2018. We then used a combination of document analysis [9], historical analysis [41], and an in-depth qualitative analysis [54] to explore the collected data.

Document analysis focuses on themes in discourses. We used Bowen's method to examine the collected electronic documents on SSM from the Taiwan government and activist groups. Our document analysis focused on 1) recognizing emerging themes or patterns in the documents both inductively and deductively [22]; and 2) analyzing the original purposes of the documents and the background of the provided information [9]. **Historical analysis** foregrounds causes and consequences, an emphasis on processes and events over time, and the use of systematic and contextualized interpretations [41]. Our historical analysis included the following steps: 1) we identified significant milestones of activities and events in SSM; 2) we highlighted the evolution of multiple technical tools that supported and mediated SSM; 3) we plotted results of the first two steps in the same timeline and investigated potential relationships between events and consequences.

We also conducted a **qualitative analysis** [54] of collected data to investigate how deliberative democracy was supported and promoted at the national level in the pursuit of legalizing SSM in Taiwan and through an evolving sociotechnical ecology [8] over time. Our coding and analytical procedures were as follows: 1) All authors closely read through the collected data and collectively identified thematic topics and common features in the data for further analysis. 2) All authors carefully examined and reviewed the thematic topics and developed subthemes. 3) All authors collaborated in an iterative coding process to discuss, combine, and refine themes and features to generate a rich description synthesizing the technology-supported deliberative democracy unfolded in Taiwan's SSM movement. 4) All authors collaborated to interpret how the emergent themes reflected, added nuance to, and/or problematized specific tenets of deliberative democracy and of experience design, particularly as they related to Deweyan notions of experience and democracy.

FINDINGS

We now present our findings regarding technology-enabled deliberative democracy at the national level in Taiwan, leveraging the theory of deliberative democracy.

Getting SSM into the Public Sphere (2015-2016)

From October 2015 to August 2016, SSM was just an emerging political agenda. Both pro- and anti- SSM groups were struggling with bringing the public's and the government's attention to this topic. Yet a significant incident happened on October 16, 2015, which helped SSM emerge as an influential social movement. Jacques Picoux, a French national who taught at the top-ranked National Taiwan University, committed suicide after his same-sex Taiwanese partner of 35 years died the year before. A news article summarized the episode as follows [38],

They have been living together for 35 years but they are still considered strangers by law. This is a true story about two men. J is a foreigner who taught at a university in Taiwan. His partner C was dying because of cancer. C's only wish was to let J continue to live in their house and leave enough money for him to live the rest of his life. This was such a simple wish but it was almost impossible to make it true because they were not allowed to get married. They were literally strangers to each other according to Taiwan's civil law. Even at the hospital, doctors only talked to C's family members and let them make decisions on C's medical treatment.

Though about an individual couple, the story ignited large-scale deliberation on SSM among policymakers and citizens. For example, a Green Party member shared this story on Facebook and noted, "*I support same sex marriage so all the people who love each other do not need to be afraid that everything they share with each other will be taken away from them. They should also have the right to make decisions on their partner's medical treatment.*" Many citizens also commented on her post, including "*this is so sad. If we give them the basic human rights, there won't be such tragedies*" and "*being together for 35 years ... they did something that many heterosexual couples may not be able to.*"

These public deliberations gradually led to the rise of pro-SSM groups (anti-SSM groups then emerged as a counter movement) and drew the government's attention to the issue. During the period of October 2015 to August 2016, the "join.gov.tw" platform (公共政策網路參與平台) was a primary, if not the only, tool in the pursuit of SSM in Taiwan. It was used to collect public opinions about this complex social issue and support dialogue between pro- and anti- SSM citizens as well as between the government and citizens. Join.gov.tw was launched in February 2015 by National Development Council, to pursue "collective wisdom" from citizens and to adhere to the core concepts of the quest for "the interests of all people," "cooperation between public and private sectors," and "innovative implementation," to carry out the policy with full vigor and urgency [49].

As described in [40], the primary goal of the join.gov.tw platform is to facilitate two-way communication between government offices and members of the public on regulatory matters. Through the platform, citizens can collectively engage in political debates and policy-making using the following system features: (1) *Propose.* Any citizen can propose new rules, regulations, and public policies or amend existing ones. If it receives 5,000 "support" within 60 days, the government must officially respond. (2) *Talk and Discuss.* The government will post work-in-process drafts for policies, regulations, and legislations in this section and open for public discussion. (3) *Supervise.* The government publishes summaries, reports, budgets, and expenses of government-led projects and initiatives. Citizens can review these documents and provide suggestions. (4) *Contact the Government.* Citizens can directly email the ministers of various governmental agencies. During the crucial period of the early SSM movement (Oct 2015 – Aug 2016), the "Talk and Discuss" feature in join.gov became the most useful and influential technical tool for the SSM movement, especially concerning the three short surveys initiated by Ministry of Justice.

In deliberative democracy, citizens exchange arguments and consider different claims that are intended to assert recommendations based on social norms. Conflicting recommendations typically reflect different normative views. Deliberative democracy, then, is not only about the recommendations (e.g., in this case, whether to legalize same-sex marriage) but also about background norms (e.g., protection of the nuclear family unit as a means to maintain social order, the conferral of equal rights to all citizens on the basis of their equality). Taiwan's open government platforms supported both levels of deliberation. A significant use of join.gov during the earlier phase of the movement was to propose two diverging proposals about SSM. The timeline shows that P1, a pro-SSM proposal, was almost immediately proposed after the Ministry of Justice posted two official responses to the above-mentioned surveys (Sept 18, 2016). P1 stated, "*Now 20 countries have legalized same-sex marriage. This number will only go up not down. Will Taiwan become the last one to do so? We can no longer ignore the LGBT community and their needs.*" Within a month, this proposal surpassed the 5,000 support votes threshold, automatically triggering a formal response from the government.

A month later, an anti-SSM proposal was posted on November 14, 2016 and it crossed the 5,000 vote threshold in two days. This proposal advocated setting up special regulations about gay couples' social rights (e.g., medical treatment and inheritance) rather than modifying existing laws on marriage and highlighted six negative impacts of SSM. Significantly, they did not challenge the argument that same-sex couples deserved protections; rather, they shifted the scope of the solution away from marriage to more narrow approaches. They claimed that to revise laws and legalize SSM would 1) cost tremendous public resources and slow down the economic development; 2) trigger large scale social tensions and controversies; 3) make Taiwan the first in Asia to conduct such

a risky experiment; 4) undermine the population growth and sustainability of Taiwan society; 5) increase the risks of AIDS; and 6) hurt the healthy development of children.

The Legislative Yuan officially had to respond to both, forcing the government to take actions that they might never have otherwise taken. On March 30, 2017, the Ministry of Justice posted official responses to both proposals and summarized a series of government actions, including: contracting researchers and experts to conduct a study on social impacts and possible legislation procedures of SSM; holding four public hearings in major cities to openly discuss SSM with citizens (November 28, 2016); inviting all government departments to evaluate how SSM may affect their future work; and reviewed and passed the revision of civil law on SSM (December 26, 2016). Consistent with deliberative democratic values and practices, the earlier deliberation triggered a series of studies that would better inform all stakeholders, contributing to, in the words of Dahlberg, "critically informed public opinion that can scrutinize and guide official decision-making processes" [13].

Join.gov.tw as an open data-open government channel made it possible for both pro- and anti-SSM citizens to deliberate with each other and the government concerning both specific policy recommendations and background norms. We identified a number of most frequently discussed themes emerging in the join.gov online discussion and example conversations between pro- and anti-SSM citizens (as comments and replies to comments that received most attention from online users). For lack of space, we'll only show a glimpse of one to capture the flavor: the racism metaphor (i.e., that unequal access to rights based on demographic class is unlawful, as in the case of racism).

Typical pro-SSM post: "*Marriage is marriage. There should not be different marriage laws for different groups. Having a special law for same-sex couples is like having a special law for new immigrants.*"

Typical anti-SSM reply: "*The pro-SSM people always like to compare SSM with racism to show how they are discriminated. They have no logic here: homosexuality is about a sexual tendency not a race.*"

Other norms that emerged include the following: human institutions should follow nature; societal privileges must be earned through societal contributions; children must be protected to give them every chance to grow up as healthy and productive adults; because human sexuality can be a source of social disruption, it should be regulated and carefully taught to the young; and the particularities of Taiwanese and Chinese cultural traditions should inform debates on social change. The back-and-forths show that deliberation brought into view contentions about social norms, revealing how policy preferences rested on constellations of beliefs about norms, one emphasizing the rights and responsibilities of the traditional family unit, and the other favoring an

emancipatory framework that seeks to extend rights to a group to whom they had been denied.

Interestingly, though citizens held opposing opinions on SSM, they agreed that the government was mishandling the matter. Pro-SSM citizens disliked the government's action to collect public opinions on SSM because "*human rights should not be voted on.*" One comment said, "*The government claims that 'we have the duty and responsibilities to serve its entire people and protect its entire people's human rights. This will not be changed by any public opinion.' Then why are we having these surveys?*" Anti-SSM citizens also disapproved of the surveys: "*Why does the government waste time on running these surveys and modifying current laws on marriage? They can just propose some special regulations to solve issues about gay people's social and legal rights. We need a strong government that can focus on national development and economic growth, not on something like SSM that only a handful of people care about.*"

These discussions, dialogs, and critiques did not go in vain: the government not only reviewed the survey results and online discussions but also engaged in conversations with citizens. On August 14, 2015 and August 5, 2016, Ministry of Justice posted two official responses to the surveys and citizen comments. These responses especially focused on: 1) answering citizens' questions on why there were three surveys and their differences in terms of legal language (e.g., revising existing civil law vs. proposing new special law; marriage vs. partnership); 2) clarifying confusions about definitions of partnership rights and equal marriage rights; 3) responding to complaints about the fairness and necessity to engage the general public in SSM discussions via online surveys. In addition, they expressed the Taiwan government's appreciation of different voices and opinions ("*The true nature of people's rights is to always question not blindly trust the government that has power*") and the intention to continue conversations on SSM.

In summary, during this phase SSM went from an activist concern to a matter in the public sphere. This movement – and not whether disputants agreed with each other about policies and recommendations—is the deliberative democratic achievement of this phase. Specifically, it lead to the aggregation and development of pro- and anti- arguments and counterarguments, which clarified the societal norms that were activated in the conflict, and triggered government responses, including both research activities and an openness to changing relevant laws.

Same-Sex Marriage in the Public Sphere (2016-2018)

Soon, the SSM debate spread out from join.gov.tw to various online and offline activities and social events, even before the Ministry of Justice's posting of official responses (Mar 2017) or the judicial ruling (May 2017). These activities and events included fundraising and YouTube videos to support SSM (starting Dec 2016), advertising (TV, newspaper, and online), campaigns for equal marriage rights (starting Dec 2016), a pro-SSM parade and benefit concert (Dec 2016),

public assembly and live streaming to support SSM (co-located with the Legislative Yuan's review of civil laws on SSM on December 26, 2016), and social media campaigns both pro- and anti-SSM (starting March 16, 2017).

In this process, citizens and groups who shared the same values and interests together used social media platforms such as Facebook to publicize these bottom-up movements, and to make these collective activities and events possible. These platforms, as already confirmed by prior work on social media supported democratic practices (e.g., Facebook, Twitter, and Reddit; see [12][30][51][52][59]), constituted important part of a sociotechnical ecology where the government, activist groups, and the public engaged in different practices of democratic deliberation toward pro- or anti-SSM, e.g., voting, debating, signing signatures, and publishing open letters and opinions. For example, the three proposals on join.gov were widely shared on Facebook, Twitter, and other social media platforms. Another example is the Lightup project (點亮計畫) launched by The Lobby Alliance for LGBT Human Rights. Embedded in Facebook, this project aimed at showing district legislators how many Taiwan citizens supported same-sex marriage. To do so, users would enter their address in an interactive map of Taiwan, which would generate a "light" on the map. 53,926 citizens have participated in this project and "lighted up" Taiwan.

In addition, video-sharing platforms such as YouTube played a significant role in shaping how different political views were deliberated and communicated in the pursuit of SSM. In contrast to news reports that often represent impersonal and generalized views, these videos introduced the intimate and personalized narratives to the public discourse – by showing what people encountered in their everyday lives, what drove them to engage in supporting or against SSM, and what they expected from their efforts.

One of the first SSM videos connected to Taiwan's political process—*Dad's words from his heart*—was posted on Youtube by Marriage Equity Coalition Taiwan (婚姻平權大平台) on December 3, 2016 and was watched more than 330,000 times on Facebook and 214,620 times on Youtube. It told a story about how a father reacts to the fact that his daughter is lesbian: "*When I found out my daughter was a lesbian, her mother and I were unhappy—but when I found out she was unhappy about her life as she had to pretend to be straight, we didn't want to force her to keep living like that.*" Another was *My Dear Father*, which was published on April 23, 2017, watched more than 140,000 and shared 1,532 times on Facebook, and watched 142,603 times on Youtube. It showed the story of a middle age man coming out to his 70 year father and their struggles: "*Family is what supports us to keep moving forward and what encourages us to face all types of challenges. No matter we come out or not, we hope to tell people we love that we love them. For the people we love, please give gay people an opportunity to get married and be supported by family.*" This video sought to counter the belief that same-sex marriage is harmful to families by

offering a counter-example in which the values of familial harmony and filial piety are perpetuated via SSM. Such stories are both anecdotal and highly emotional—obviously excluded from the sort of rationality envisioned in Rawlsian democracy. Yet it achieves a different purpose. Deliberative democracy depends on principles of mutuality and charity, and such stories can help disputants connect to and humanize each other.

Anti-SSM groups also used video sharing as a means of storytelling. They shared videos to explain their concerns that Taiwan, which situated in East Asian culture, was not ready for SSM because it threatened the stable family/social structure in Taiwan and made younger generations confused about their gender and sexual identities. One widely shared video (both online and on TV) was about parents' anxiety about how their children would be educated. In this video, parents asked: "*if same-sex marriage is legalized, will schools teach our children that they can have two moms and two dads? Since teaching children how to protect themselves is part of sex education, will schools teach them how to have sex with same sex partners? Can you imagine how bizarre this could be?*" This video was politically effective because it presented same-sex marriage as a threat to traditional families, whose ties remain stronger in many Asian cultures than Western ones, ties that are enshrined in ideological values (e.g., the Chinese notion of filial piety and respect for elders) as well as economic systems (e.g., the practice that the eldest son takes care of his parents in their retirement).

As the pro- and anti-SSM movements grew, the technical tools that people used became more heterogeneous. Join.gov was no longer a dominant channel—it had done its work. On the other hand, they shaped a new political discourse through demonstrating personal, sometimes intimate, narratives. In this sense, the sociotechnical ecology for SSM became not merely instrumental but also expressive [58], though the two are obviously and intentionally intertwined. Nor did these efforts stop in the digital realm: they triggered significant offline social movements. A citizen summarized, "*It's truly amazing to witness how a dim spark in the virtual world develops into tides and waves in the real world [...] we are not merely "keyboard men" – we want to change the society and let the world see Taiwan as a democratic and free place.*" Channels and touchpoints continued to proliferate, providing citizens with multiple points of entry and opportunities to experience deliberation: according to Marriage Equity Coalition Taiwan, in 2016-2017 alone, 384,000 citizens attended five large-scale parades; more than 1,000 volunteers were involved; 28 offline events and 5 on-site campaigns to support same-sex marriage were held; 257,600 booklets were printed and distributed; 76 invited talks were given at national and international venues; 20 press conferences were held and 20 public statements were published; and three photo exhibitions were hosted with more than 28,000 visitors. And, of course, on Nov. 24, 2018 when the referendum itself was held, more than 11 million people voted, representing over 55% of Taiwan's total voting population, got offline long enough to cast their vote.

After the Referendum (2018-2019)
After all the pro-SSM proposals in the referendum were rejected, a pro-SSM group published a widely shared public statement on Facebook on December 26, 2018. In this statement, they expressed regret, appreciation of Taiwan's democracy, and hope for a better future:

As President Tsai said that no matter which side wins in this year's election and referendums, the whole process is an embodiment of democracy. We respect the choice of each and every Taiwanese has made while taking a clear-eyed view on the current political realities. [...] And the simple reality is that democracy exists in Taiwan just as the LGBT community long exists on this island. And this existence differs in no way from our lives, from those who exist and take human rights issues to heart. Let us work together.

A similar spirit was manifest in a music video posted on YouTube, entitled "The Whole World Can Be Your Support." The singer explained, "*I know it is impossible to change the world through a two-minute long song. But I hope that at least people are willing to spend the two minutes trying to understand a different way of thinking. It doesn't matter if nothing changes. This open attitude would be the seed for conversation and progress.*" It is hard to miss the respect, mutuality, and charity in these quotes.

In early 2019, the Legislative Yuan drafted legislation complying with the 2017 ruling, vastly expanding the rights of same-sex couples to include marriage, while still limiting some rights (e.g., the right to adopt children not biologically related to either partner). On May 24, 2019, the legislation, having passed the legislature, was signed into law by President Tsai; hundreds of couples got married the same day.

CONCLUDING DISCUSSION
In contemporary society, most organizations are IT organizations, an insight not limited to for-profit businesses but which also increasingly includes government entities. And organizations, including governments, can be understood as embodying ecosystems of channels, each with its own touchpoints whereby the organization connects with the outside world—its customers, suppliers, partners, and other stakeholders [50]. Through those touchpoints, value is created in the exchanges—of information, money—that they enable. Increasingly, these channels are digital, and as a field, HCI has done much to develop them. We have tried to show that Taiwan's e-government ecology structurally resembles the digital ecology of a large business, in that it leverages multiple channels and touchpoints to produce mutual value for its "users" (i.e., voting public) and itself. Like many other organizations, it uses a combination of its own channels (e.g., join.gov) and public channels (Twitter, Facebook, and YouTube) to shape both online and offline behavior. Further we have used the theory of deliberative democracy to help us understand whether, and in what ways, it has succeeded.

Deliberative democracy sets out to guide political systems toward democratic legitimacy. It deploys a network of inter-related concepts to describe and guide the development of such systems: they should feature actual (as opposed to hypothetical) discourse, contestations of social norms, communicative competency, broad and even universal participation, intellectual and moral growth by means of political participation, the pursuit of consensus, and so on. We have tried to show that many of these qualities were present throughout the course of Taiwan's SSM political process, that is, that there were robustly contested discourses, in which citizens widely participated, leading to increases in political knowledge and the clarification and evolution of societal norms, and which led to several kinds of consensus (if not the precise meanings of same-sex marriage itself).

Putting these two ideas together—that of the channel ecology and that of a deliberative democratic process—we can say the following: if stakeholder engagements with organizational channels and touchpoints produce mutual value, then the value that Taiwan's citizens obtained was their ability to cause and shape a major societal change that the majority wanted to see (if not, as it turns out, manifested in exactly the same way); and the value the government of Taiwan obtained was that of democratic legitimacy. Concerning the latter, we found both internal evidence (e.g., the gracious ways that the activists accepted their defeat in the referendum) and external evidence (e.g., global positive headlines about Taiwan's political achievement). The fact that there was a vote does not in itself provide legitimacy—some votes are tainted with coercion, for example, while others happen in spite of it not being clear whether the public actually understands what's at stake. The legitimacy is derived from the deliberation, highlighted in this case not only by the referendum, but also because all five proposals on the referendum were derived from the public and in fact reflected different positions within the debate, providing meaningful choice.

Seeing Consensus

Consensus is considered one of the key outcomes of deliberation in deliberative democracy. It often relies on how the process of consensus aligns with "idealized criteria of deliberation, including reflexivity, reciprocity, and inclusiveness" [13]. While some theorists believe the deliberative process of exchanging contrasting views should produce a consensus, according to public policy scholar Jennifer Eagan, "even when the exchange of reason, arguments, and viewpoints does not seem to produce a clear outcome… the dissent produced and the continuing debate, enhances the democratic process" [19]. One way it does so is to contribute to consensus about what the debate is about, that is, the "sides" and their "stories" become more clear, even as the public increases its consensus that this is an issue that matters.

In the early stages of the process, the channel join.gov provided touchpoints wherein activists could set in motion a democratic process. Once that process had entered the public sphere, it moved beyond join.gov and spread across many

other channels and touchpoints. As it did so, the linguistic character and societal impacts of the messages widened considerably and, in spite of its failure to arrive at a consensus on the primary issue, nonetheless bringing about several other consensuses, which included the following.

- *The rights of same-sex couples were improperly denied*, while the practical implications were contested, there was an underlying consensus that something should be done for same-sex couples.
- *What the sides respectively represented*, that is, what were the policy recommendations and how do they reflect and/or challenge social norms?
- *The government deliberated too much and acted too little*, treating a universal human right as something to vote on (pro-SSM), or wasting resources on something that only a few people care about (anti-SSM).
- *Same-sex marriage (or lack thereof) threatens Taiwan's social values and deserves national attention*, either because a universal human right was denied to a social group (pro-SSM), or because SSM threatens the traditional family and with it social stability and Taiwanese/Chinese traditional identity (anti-SSM).
- *The SSM debate should be resolved democratically*; strong participation throughout the political process by all parties suggests both buy-in to and competency with democratic processes.
- *Taiwan's democratic system was up to the challenge and its outcomes should be trusted*; we found throughout our data approval that the process was being handled democratically, even by those who were on the losing side.

The contentiousness of contemporary democracies is well known: climate change, Trump, abortion rights, Brexit, and racial violence all come to mind. Yet these hot-button issues, urgent and serious though they are, can mask other benefits of democratic processes, including the many uncelebrated forms of consensus that it facilitates. Our first implication for HCI is that it can help to support and surface such consensus, helping participants to find new common ground to stand on.

Citizen Journeys

A commonplace in contemporary HCI practice is the concept of the "journey": practitioners seek to understand, create, and improve user journeys, customer journeys, and service journeys, to name a few. These have come to replace more static conceptions of users, including mental models and traditional personas. The goal is to understand users, customers, and stakeholders in a time-bound way, where knowledge, tasks, goals, emotional experiences, and other aspects of human experiences with organizational engagements are located over time, with beginnings, middles, and ends. The journey metaphor also fits well with deliberative democracy's conception of citizens as growing intellectually and morally over time through participation. We propose the integration of these two ideas, such that HCI contributes to the conception and development of *citizen journeys*. Citizen journeys must not be limited to voting itself. In contrast, we

advocate an expansive notion of citizen journeys, beginning in early education and proceeding throughout all of life. Just as societies inculcate the young into traditions, belief systems, social roles, and rituals, so democratic societies should actively develop deliberative citizens from a young age.

For example, communicative competence underlies the preconditions of deliberative democracy: mutuality, respect, generosity, attribution of sincerity and true beliefs to others, etc. Yet communicative competence is acquired, and so it is possible to envision citizen journeys that are intended to facilitate the development of communicative competence and these values. Likewise, many of us in HCI are leaders in education, industry, or government: one of our roles is to help prepare the next generation, which not only includes domain knowledge but also leadership and collaboration abilities— learning how to work together, to listen to others, to resolve conflicts: how, as a profession, can we support those journeys? Our point here is to think beyond voting to the experiences that prepare us intellectually and morally to act as citizens in democratic societies, enabling citizens both to effective enact the changes they want to see, while also to be able to grow through conflicts, rather than be defeated by them.

Deliberative Experience Design

One implication of this study is that actual (as opposed to hypothetical) discourse requires actual channels, and HCI practitioners are already effective at designing them. Best practices suggest that channels and their touchpoints should have clear and well defined purposes [50]. A technical support phone line, an electronic shopping cart, and a Contact Us form, for example, are each very clear in how they work and what they offer. As we start to expand and develop the concept of citizenship journeys, it is likely that the purposes of channels and touchpoints of e-government will gain clarity. Our case study has revealed what many of those touchpoints and their purposes were in the context of the same-sex marriage political process, from the specific mechanisms of join.gov (e.g., its five steps, its 5,000 count threshold to trigger government response) all the way to the voting machines that recorded the counts in the referendum itself.

But our study also showed something else: not all of the deliberation cohered to standards of rationality. Granted, much of the content that we collected and presented here constituted rational political arguments, often in the form of political recommendations that better embody accepted societal norms (e.g., all people enjoy equal rights under the law; and marriage is a legal right; but same-sex couples are legally prohibited from marrying; therefore, same-sex couples do not enjoy equal rights; therefore, the law should change so that they may marry). Even so, many of the arguments were not new or surprising, and we saw little evidence that anyone changed sides. However, the contents and impacts of the deliberations in Taiwan's same-sex marriage process goes far beyond formal arguments. They included a full range of human expression: personal narratives, sarcastic ripostes, parodies, accusations, acts of greeting and welcoming, marches and parades, threatening scenarios, musical fellowship, touching videos, animations, and more. Contemporary theory of deliberative democracy argues that such expressions actually are and should be part of democratic processes. Again—if the assumption is that political processes require actual discursive encounters with other perspectives, then it follows that those perspectives will be manifest in expressively rich ways. If we want to appreciate another culture, we don't typically turn to theses about that culture; we look to its food, music, rituals, literature, etc. Further, if the assumption is that democracy depends on mutuality, respect, generosity, and so on, then it follows that these will be established and developed through communicative encounters that reflect the whole range of human living and expressing.

The implication for HCI, then, is that the development of citizen journeys as well as democratic channels and touchpoints must not be overly rationalistic. While platforms like pol.is offer to support rational political engagements, what extends beyond a narrow conception of "rational" is nonetheless vital to deliberative democracy. HCI's UX turn nearly a generation ago implicitly recognized the same underlying issues, so here is an opportunity for the field. We are calling for a *deliberative experience design*, which, like other practices of experience design, is neither pursued nor realized as a "tool" or even a "platform," but rather as an ecology of channels, whose touchpoints offer both heterogeneity and yet also cohesion within the experiences of the subject—the deliberative subject—rather than a tool or technology.

None of this is meant to imply that digital democracy or e-government should be operated like for-profit businesses. Rather, we recognize that many of HCI's achievements in value creation and stakeholder experience design have unfolded in the for-profit sector, and that many of those achievements presumably transfer to the domain of supporting democracy. Indeed, many of the deep values of deliberative democracy share a history with the Deweyan ideas undergirding experience design [46], specifically, notions of a purposeful yet emotional and expressive individual who develops and grows through meaningful interactions with others. Thus, our call is to bring all the resources that we have as HCI researchers and practitioners to support authentic deliberations and the intellectual and moral growth that they promise. Then, if a political philosopher [26] writes, "most of the dominant communicative streams are commercially motivated and controlled, often pandering to and helping to shape people's fears, anxieties, antipathies, acquisitive greed, and materialistic self-identifications," HCI can respond that we are doing our part to influence "the redirection of this dangerous misuse of worldwide human communicative potentials" and spreading democratic legitimacy to communities, societies, and nations.

ACKNOWLEDGEMENTS

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