

Clarifying and Defining the Concept of Liquid Democracy

Chiara Valsangiacomo 

University of Zurich, Zurich, Switzerland

Correspondence

Chiara Valsangiacomo, Department of Political Science, Chair of Political Philosophy, University of Zurich, Affolternstrasse 56, 8050 Zurich.
Email: chiara.valsangiacomo@uzh.ch

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Abstract

Liquid Democracy (LD) is a recent phenomenon that could radically affect our understanding of democracy. Yet, there remains significant semantic confusion surrounding this concept, and researchers in the social sciences, as well as in political theory, currently lack a general definition that is broadly accepted as a standard reference. Therefore, this article addresses the following question: What is LD and how can we best define it? Following a classical, semantic approach to concept formation in the tradition of Giovanni Sartori and John Gerring, the article advances a new, minimal definition: LD is a decision-making scheme characterized by liquidity—that is the systemic and flexible mix of direct and representative democracy—and essentially based on the principles of voluntary delegation and proxy voting. This definition can serve as a starting point from which further theoretical and normative studies of LD could be conducted in the future.

Zusammenfassung

Liquid Democracy (LD) ist ein neues Phänomen, welches unser Verständnis von Demokratie grundlegend verändern könnte. Dennoch herrscht nach wie vor erhebliche semantische Unklarheit in Bezug auf dieses Konzept, und den Forschern in den Sozialwissenschaften wie auch in der politischen Theorie fehlt derzeit eine allgemeine Definition,

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die als Standardreferenz weithin akzeptiert wird. Dieser Artikel befasst sich daher mit der folgenden Forschungsfrage: Was ist LD und wie können wir sie am besten definieren? In Anlehnung an einen klassischen, semantischen Ansatz zur Begriffsbildung in der Tradition von Giovanni Sartori und John Gerring wird eine neue, minimale Definition vorgeschlagen: LD ist ein Entscheidungsfindungssystem, welches sich durch Liquidität auszeichnet, d. h. durch eine systemische und flexible Mischung aus direkter und repräsentativer Demokratie, und welches im Wesentlichen auf den Prinzipien der freiwilligen Delegation und der Stimmrechtsvertretung beruht. Diese Definition kann als Ausgangspunkt für weitere Studien über LD in der Zukunft dienen.

Résumé

La démocratie liquide (DL) est un phénomène récent qui pourrait affecter radicalement notre compréhension de la démocratie. Cependant, il subsiste une certaine confusion sémantique autour de ce concept, et il n'existe actuellement aucune définition générale qui soit largement acceptée comme référence par les sociologues ainsi que par les philosophes politiques. Par conséquent, cet article aborde la question suivante: Qu'est-ce que la DL et comment pouvons-nous la définir au mieux ? En suivant une approche sémantique classique de la formation des concepts dans la tradition de Giovanni Sartori et John Gerring, l'article propose une nouvelle définition minimale: La DL est un système de prise de décision caractérisé par la liquidité, c'est-à-dire la combinaison systémique et flexible de la démocratie directe et représentative, qui repose sur les principes de la délégation volontaire et du vote par procuration. Cette définition peut servir de point de départ à de futures études sur la DL.

Riassunto

La democrazia liquida (DL) è un fenomeno recente che potrebbe influenzare radicalmente la nostra comprensione della democrazia. Permane tuttavia una certa confusione semantica intorno a questo concetto, e attualmente manca una definizione generale che sia ampiamente accettata come riferimento da sociologi così come filosofi politici. Questo articolo affronta dunque la seguente domanda: Cos'è la DL

e come possiamo definirla al meglio? Seguendo un approccio classico e semantico alla formazione dei concetti nella tradizione di Giovanni Sartori e John Gerring, l'articolo avanza una nuova definizione minima: la DL è uno schema decisionale caratterizzato dalla liquidità, ossia l'unione sistemica e flessibile di democrazia diretta e rappresentativa, che si basa sui principi della delega volontaria e del voto per delega. Questa definizione può servire come punto di partenza per studi futuri sulla DL.

KEYWORDS

Liquid Democracy, Proxy Representation, Voluntary Delegation, Minimal Definition,

INTRODUCTION

Imagine a group (or population) with universal suffrage, all of whose members (or voters) are entitled—for every collective decision (or policy)—to either cast their vote directly or to delegate it to a representative (or proxy). Anybody can freely decide why and to whom to delegate their vote, or to run as a proxy. Voters can choose different representatives for different issues, with each proxy representing their original voters for one or more policies, or policy areas, so long as the delegation is not withdrawn. There is no cap on the total number of representatives, and proxies can redelegate to other proxies. For every decision, non-delegating voters cast a single vote, while proxies cast all delegated votes plus their own. If we assume, to simplify, that the decisions are binary, the outcome is defined by majority rule. This entire process is facilitated by information and communication technologies.

As I will demonstrate, this brief overview describes the core mechanics of a nascent phenomenon called Liquid Democracy (LD). The concept of LD gained prominence in the 2010s, mainly thanks to the German Pirate Party, but the term itself had already been present online since the early 2000s. In these venues, LD has generally been celebrated as a hybrid-voting scheme, combining the best of direct and representative democracy. In addition to this lively debate, the academic literature in computing and game theory has increasingly engaged with this idea (e.g., Christoff & Grossi, 2017; Fan et al., 2020).

Despite the praise it has received from computer enthusiasts and growing academic interest in its technical implementation, LD has remained largely unaddressed in political science and philosophy. This has resulted in inconsistent formulations of LD, leading to significant conceptual confusion that needs to be addressed before further empirical or normative studies can be undertaken. Hence, this article addresses the following question: What is LD and how can we best define it? By engaging in concept formation, it provides a first in-depth conceptual analysis of LD that aims to clarify its meaning and foster a critical academic debate. In so doing, it follows up on the slow but significant increase in attention that LD has recently enjoyed in normative democratic theory (e.g., Blum & Zuber, 2016; Landemore, 2020; Lucardie & Vandamme, 2021; Valsangiacomo, 2021).

The article is structured as follows: First, I present the methodological framework. I then reconstruct the history of LD and survey its various definitions. I break LD down into its basic elements and map out the three properties that have been most prominently highlighted in the literature—proxy representation, voluntary delegation, and online deliberation—and present

important, yet unsatisfactory, attempts to define LD. The next section contains the core of my concept analysis, focusing on the necessary and sufficient conditions for LD. I defend the use of the qualifier “liquid” and argue that, since LD was initially intended to improve *intra*-party democratic legitimacy, this understanding can hardly be transposed to the different context of elected legislatures and lawmaking. I thus propose a more parsimonious definition based on two of the three original properties: LD is a decision-making scheme characterized by liquidity (the systemic, flexible mixture of direct and representative democracy), based on the principles of voluntary delegation and proxy voting. Finally, I evaluate this definition and conclude by briefly addressing some criticisms and highlighting the relevance of LD for democratic theory.

METHODOLOGICAL REMARKS

This section introduces the classical, semantic approach—represented by the tradition of Giovanni Sartori and John Gerring—that I follow in articulating a conception of LD. My approach to concept formation is classical insofar as it follows a longstanding philosophical tradition of understanding complex concepts by breaking them down into simpler components (e.g., Laurence and Margolis 2003: 8–27; Olsthoorn, 2017: 164–167; Riemer, 2010: Ch. 7). This definitional view of concepts is reductionist because it singles out only those features that all cases falling under a given concept share. In general, classical concept analysis aims to identify a set of necessary and, taken together, sufficient conditions that define a concept. The result typically corresponds to what Gerring identifies as minimal definitions, namely specialized definitions which revolve either around an abstract, resonating principle or, more commonly, around a core component that nearly everyone would accept (Gerring, 2001: 135–136; Gerring & Barresi, 2003: 205–209). Minimal definitions resemble Weberian ideal types insofar as both approximate a real phenomenon by highlighting a handful of core elements that are typically highly consistent with each other.¹ Although classical concept analysis is by no means unchallenged—one prominent alternative being family resemblance theory—it remains a standard practice in contemporary political philosophy.

My approach to concept formation is semantic because it makes use of a semiotic triangle, a tool repeatedly invoked by Giovanni Sartori (1970, 1984) and John Gerring (1999, 2001, 2012), in theorizing about the meaning of words. The basic idea of the semiotic triangle is that a word is only arbitrarily linked to a real-world object—or class of objects—to which it refers (i.e., the referent, extension, denotation, or *definiendum*). What enables a meaningful connection between them is the mental perception or symbol associated with them in our minds (i.e., the reference, intension, connotation, or *definiens*). In other words, concepts mediate between reality and language, with meaning residing in the conceptual vertex of the semiotic triangle. Concept analysis thus involves a dynamic process of “triangulation” between the word, the concept, and the phenomenon of LD (Gerring, 1999: 389).

Semantic confusion can arise when, as with LD, a new phenomenon appears in the real world and it is unclear whether we already possess a coherent concept for it. Although we can coin a neologism, the term “liquid democracy” does not itself provide insight into its meaning. It is similarly problematic to point at a real-world exemplar and claim that “this is really LD”—while representing a first step, such an ostensive definition is insufficient to grasp the essence of LD. We need a more precise understanding before we can elaborate a useful definition of it, one which is “intended to seize the object” by singling out all instances of a concept and only those (Sartori, 1984: 30).

Classical minimal definitions might look austere, but the process of carving them out is quite elaborate. Sartori (1984: 40) proposes to define concepts step by step. The first step is to

¹This identification of minimal definitions with ideal types is aligned with Gerring (1999: 386) but conflicts with his later works (e.g., Gerring, 2001; Gerring & Barresi, 2003).

reconstruct the concept by “canvassing” its history and “assessing its current state in the literature.” Here, Sartori points out the need to organize the intension of a concept in light of the existing literature. He suggests collecting definitions, extracting all possible characteristics, creating a matrix of these properties, and grasping their configuration. Similarly, Gerring (2001: 131–134; Gerring & Barresi, 2003: 205–207) recommends making a survey of all possible concepts and sampling usages of the concept. On the basis of this literature review, both researchers recommend constructing a typology of the results. This is done in *Concept Reconstruction*.

The second step is to create the concept by proposing a new, revised, and hopefully improved definition. Sartori (1984: 51) first invites us to select a designator for the concept and then discusses the formation stage proper, distinguishing definitions with more theoretical import versus empirical utility (Sartori, 1984: 54). As a political theorist, I lean towards the former. General or abstract definitions are useful because of their contextual adaptability (i.e., across research projects and disciplines), because they serve mapping and organizational purposes, and because they provide a foundation for empirical scientists and normative theorists. That said, I try to avoid the highest level of abstraction: definition by negation (Sartori, 1970: 1042). Instead, I prefer to define LD positively, aiming to identify at least one precise connotation. Finally, Sartori (1984: 55–56) suggests focusing on the concept's defining properties, i.e., necessary conditions that are true by definition (a priori) and bound the concept's extension. This is done in *Concept Formation*.

Gerring (1999, 2001) discusses in depth the criteria of concept goodness that social scientists can adopt, arguing that researchers can emphasize different desiderata, depending on the function their concepts need to fulfill (1999: 367). For him, concept formation is a series of trade-offs among desiderata. Some of these criteria (e.g., familiarity, resonance) are purely linguistic. I address these criteria in *Liquidity as Designator*, when justifying my choice to retain the label “liquidity.” Other criteria (e.g., theoretical and field utility) are extra-conceptual, in the sense that conceptual analysis is driven by reflections about the overall theoretical framework or research agenda. These concerns are not central to my analysis, but I briefly touch on one of them (field utility) in the conclusion, when discussing its implications for democratic theory.

In this article, I focus on the desideratum of coherence, i.e., consistency within the intension and the presence of a clear, logical relationship between attributes. Coherence is achieved when a concept revolves around a handful of core principles, and this essentialist view is compatible with my classical semantic approach. Coherence usually goes hand in hand with parsimony, which refers to the size of the intension, namely the length of the list of attributes. As Sartori (1984: 55) notes, parsimonious intension is not desirable for its own sake, but rather because it is a consequence of selecting only core attributes (i.e., necessary conditions). The new definition of LD proposed here embraces these two criteria.

Gerring (1999: 380) notes that describing a phenomenon precisely “demands plenitude,” and concepts that are deep and differentiated are better suited for this task. Like many classical concepts that are highly coherent and parsimonious, my conception of LD is not especially deep or differentiated. Yet, these desiderata are not lacking entirely: Depth is proportionate to the number of properties shared by the phenomena in the extension and, as shown in *A New Definition*, my concept is defined by three positive attributes (i.e., liquidity, voluntary delegations, proxy voting). Moreover, in *Concept Reconstruction*, I introduce several peripheral properties that, even without being included in the final definition, provide additional depth. Finally, in terms of differentiation vis-à-vis neighboring concepts within the same semantic field, the minimal definition advanced here does not fare too badly. As I discuss in *A New Definition* and exemplify in *Concept Evaluation*, it successfully delineates LD from other forms of democracy and democratic innovations. Thus, the next three sections are dedicated, respectively, to the sequential stages of concept reconstruction, concept formation, and concept evaluation.

CONCEPT RECONSTRUCTION

Some researchers claim that the idea of LD emerged around the turn of the century in a distinctly non-academic context (e.g., Adler, 2018: 94; Paulin, 2019: 75–79). Although it is true that the term was coined only recently in online forums and gained prominence mainly thanks to its real-world applications, the idea of LD is older and partly rooted in niche academic debates. In line with the methodological framework outlined above, this section surveys the literature in order to elucidate the conceptual history of LD.² The results of this reconstruction are presented in *Three Conceptual Origins* on the key components of LD, and in *Existing Definitions*, which presents the existing attempts to define LD.

Three conceptual origins

According to my reinterpretation of the literature, LD is characterized by three main properties: proxy representation, voluntary delegation, and online deliberation. All other peripheral features can be subsumed under one of these three higher-level attributes. The proxy-representation principle was conceived in the early 1910s to ensure strong proportional representation by modifying the traditional parliamentary rule of “one member of parliament—one vote.” The voluntary-delegation principle appeared in the 1960s to promote greater participation and expertise by letting citizens decide whether or not to vote directly. The online-deliberation principle was introduced in the early 2000s to improve the quality of participation by encouraging online deliberation. In the following subsections, I corroborate this claim and elaborate on these three procedural principles in turn.

Proxy representation

The concept of a proxy is pervasive in the literature on LD. The term “proxy” derives from the Latin verb *procurare*, meaning to take care (-*curare*) of something or someone on behalf of (*pro*-) someone (Online Etymology Dictionary 2019). Hence, it is a vague term that has been associated with a wide range of forms of representation.³ A proxy is described as “the agency, function, or office of a deputy who acts as a substitute for another” (Merriam-Webster Dictionary 2019), or as “the authority to represent someone else, especially in voting” (Oxford University Press (OUP), 2019). In general, it refers to the person who assumes this authority to represent others.⁴

For example, if British expats or soldiers cannot vote in person or by mail, they can nominate a close relative to vote on their behalf, who is called a proxy. An analogous mechanism exists in France (where postal voting is not permitted), termed *vote par procuration*, while in some Swiss cantons and municipalities, ballots can be cast by third parties, a practice known as *Stellvertretende Stimmabgabe*. Similarly, the term “proxy” is used to indicate the widespread corporate practice of delegating shareholder authority. Whenever a shareholder cannot personally attend the company's annual general meeting, a trusted proxy votes on his behalf, often following instructions on a signed card prepared in advance. In each case, the proxy is expected to carry out the explicit instructions of the person represented, who is physically

²This exercise thus differs from existing attempts to reconstruct the chronological history of LD (e.g., Adler, 2018; Jabbusch, 2011).

³Ranging from the idea of a procurator, proctor, or attorney to that of a delegate, deputy, or substitute, the term has been even associated with mercenaries, auxiliaries and privateers, as well as with the clinical figure of surrogate patients.

⁴A proxy can also refer to a written agreement, or contract, through which one person is allowed to represent another.

unable to vote. If more efficient voting technologies were available (like secure postal and internet voting), these proxies would no longer be needed.

Although it is possible for “proxy” to signify a mere delegate, proxy representation must fulfill a different function in the context of technology-enabled LD. Interestingly, “proxy” can also refer to “a figure that can be used to represent the value of something in a calculation” (Oxford University Press (OUP), 2019). In statistics, researchers are often confronted with unobservable phenomena. Whenever no measure is available to operationalize a given concept into a variable, statisticians commonly look for an indirect measure, called a proxy or surrogate, which can approximate the variable of interest because of a strong correlation with it. Not all proxies are equally suitable or accurate. In politics, a proxy represents, ideally with great accuracy, those who chose him as proxy.

Accuracy can be understood on two different levels. On the one hand, in a substantive or metaphysical sense, it is linked to statistical validity: Does the proxy really stand for what it is supposed to measure or represent? On the other hand, accuracy can be a purely formal criterion that describes the correctness of the computational process: i.e., all the important information is systematically and flawlessly included in the computation. In this second sense, a better question might be: How accurately does the voting weight of proxies reflect the distribution of voting power among the original voters? Or, in a democratic polity: How close are we to the “one man—one vote” standard after translating votes into parliamentary seats? Some forerunners of the idea of LD embraced the idea of proxies and proxy voting precisely in answer to the latter question.

William Simon U'Ren, a historical forerunner of LD according to Jabbusch (2011: 30), defined the proxy principle in a petition from 1912. Back then, the *New York Times* reported:

Now comes the proxy idea. It is provided that on any roll call in the legislative assembly a member is to cast for or against the measure the total number of votes he received at the polls. Thus, a socialist or prohibitionist would be able to cast the full strength of his party, even though only one might be elected. (*New York Times* 1912)

The petition, launched by the People's Power League, proposed to replace Oregon's State Senate with an assembly of sixty members. Voting across all districts was to be allowed in order to give minorities the chance to concentrate their voting power on one candidate, who, if elected, would cast as many votes as he or she received.⁵ In other words, “each member is made the ‘proxy’ of all the electors voting for him” (Barnett, 1915: 290). Then, in 1967, Gordon Tullock offered a deeper insight into proxy representation:

Let us assume that each representative in Congress simply be authorized to cast as many votes as the voters have cast for him. The total would be added by computers and the differential weighting of the various members of the representative assembly would represent their relative standing with the voters. [...] The voting on each individual measure would come as close to a national referendum as any representative body can achieve. (Tullock, 1967: 145)

Tullock's proposal hinged on a fundamental new assumption, later embraced by proponents of LD, namely that of unlimited elected representatives.

Almost forty years later, starting from the same assumption, Dan Alger succinctly explained voting by proxy as follows:

⁵Electors whose favorite candidate did not succeed were represented by the candidate for governor of the corresponding party, who became an *ex officio* member of the legislative assembly (Barnett, 1915).

With proxy voting, representatives would but rarely have an equal vote within the legislature; they would instead have a weighted vote equal to the shares of their constituents among all voters. This gives each original voter, not each representative, an equal vote within the legislature. (Alger, 2006: 4)

The basic idea is to achieve a perfectly proportional system of representation, in which the distribution of the population's voting power is approximated with maximum accuracy in the legislature. If the number of seats is uncapped, giving proxies unequal voting power is the only way to achieve procedural justice and maintain representativeness. For, in pure direct democracy, everyone would agree that the principle “one person—one vote” is fair, because it treats all voters equally by satisfying anonymity (Hodge & Klima, 2005: 4). That is, whenever disagreement emerges, a fair compromise is reached by giving each voter equal control over social choices (Christiano, 1996: 96), which imperatively requires the prevention of any systematic exclusion or wastage of votes. This ideal of procedural justice can be transposed to representative democracy, where the fairest way to apply the “one person—one vote” standard is via proportional representation, which minimizes the formal (procedural) wastage of votes as compared to majoritarian systems.

The procedure guaranteeing proportional representation under proxy voting cannot, however, be the same as in traditional representative democracies, with their fixed-seat parliaments and competitive elections. Here, the focus lies on matching up shares of national votes with shares of parliamentary seats, after which the “one member of parliament—one vote” rule applies. In contrast, proxy representation departs from this assumption, as no fixed number of seats is specified *a priori*, meaning that both electoral competition and the votes-seats transformation are eliminated. Most importantly, the absence of a cap on proxies means that the systematic wastage of votes is eliminated: All votes cast are registered and tallied without exception. Tallying all of the votes is, therefore, the only way to preserve the original voters' power against that of the proxies. Ironically, “procedural inequalities” are the only way to ensure perfect proportional representation, because the voting weights perfectly reflect the distribution of voting power among the original voters (Beitz, 1983).⁶ Hence, an argument against proxy voting boils down to an argument against proportional representation.

Voluntary delegation

The delegation of power that occurs under a proxy-voting scheme, as presented above, does not radically differ from existing electoral practices: Citizens express their political preferences by electing a candidate who represents them, on all issues, for a given timespan. In the context of LD, however, the idea of delegation is often assumed to be “voluntary” (Green-Armytage, 2015: 191). The voluntariness of the delegations derives from a free “choice of role,” namely the liberty of individual citizens either to keep their voting power or to delegate it when it comes to a particular issue (Ford, 2002: 4).

Already in the late sixties, Tullock mentioned what I call the “voluntary delegation principle” as a possible complement to proxy voting:

In the extreme case, there seems no reason why people who wish should not vote for themselves [...] by casting their single vote for and against the various proposals. (Tullock, 1967: 146)

⁶See Latimer's attempt to defend weighted voting on a normative basis (2018). His hypothetical procedural plural voting scheme strikingly resembles LD.

Inspired by Tullock and advances in computing, James C. Miller proposed the inclusion of a legal provision aimed at guaranteeing every citizen the freedom to vote either directly or by proxy:

Instead of electing representatives periodically for a tenure of two years or more, why not allow citizens to vote directly, or delegate proxy to someone else for as long as they like? (Miller, 1969: 108)

Proponents of voluntary delegation aspire to increase “participativeness” (McCarthy, 2013: 6). It is therefore unsurprising that, for Miller, antipodal outcomes could result from voluntary delegation: It is possible for a citizen either to always retain their entire voting power, transforming the system into a *de facto* pure, direct democracy, or to always delegate their vote, effectively creating a pure representative democracy. In practice, however, Miller posited that an intermediary situation was more likely, with the majority citizens delegating their voting power on some issues while retaining it on others.

The idea of voluntary delegation rests on significant normative assumptions. For example, Miller claims that voluntary delegations foster self-determination. It also entails the right to political representation or participation that is as flexible and precise as possible for the individual citizen: On the one hand, political participation is more flexible thanks to the area-specificity of delegations and its easy adaptability.⁷ The instant recall principle, which enables the original voters to punish or reward the proxy without waiting for a fixed election date, is another formal mechanism that promotes flexibility and accommodates changing values and opinions, while simultaneously sheltering citizens from proxies’ misbehavior and preventing violations of the self-determination principle. On the other hand, the flow of information concerning citizens’ preferences is also more granular (McCarthy, 2013), thanks to the free choice of the proximity basis,⁸ and it persists as long as the potential pool of proxies is kept as large as possible.⁹ Indeed, voluntary delegations make a voting system more “information bearing” (McCarthy, 2013: 3) and increase its descriptive power (Valsangiacomo, 2021: 3) or “content expressiveness” (Mendoza, 2015: 49).

The idea of self-determination inherent to voluntary delegations in turn makes room for a subsidiary principle:

Liquid democracy does at its core contain the suggestion that those who are subject to a problem be the ones who decide about its resolution. (McCarthy, 2013: 8)

Moreover, Miller expects lay citizens and more specialized delegates to coexist and cooperate, constituting another argument in favor of voluntary delegations: A system that accommodates them leverages the classical theory of the division of labor and is likely to maximize expertise without falling into the traps of elitist democracy or technocracy (Miller, 1969: 108). A system of voluntary delegation is more inclusive as a result of lower costs of participation, and this, together

⁷One day, a person could be a proxy in matters of elementary education, while delegating his own vote on matters of tertiary education, but the next day, that same person could act as a proxy for public health issues and give up delegation in matters of education. Or she could abandon activism entirely and delegate all her choices to somebody else. Moreover, that person could decide to occasionally vote in individual polls of particular importance to her.

⁸The idea that dimensions for proxy selection (e.g., common interest, shared identity, geographical proximity, etc.) are left to the citizen's discretion.

⁹Low barriers to participation should serve this purpose. Ford (2002: 5) is the only scholar who has made a concrete proposal concerning an entry exam.

with specialized labor, mobilizes a wide range of expertise without burdening citizens with exorbitant entry and information costs.¹⁰

Bryan Ford builds on a similar epistemic argument for his conception of delegative democracy, which integrates the principle of metadelegation (or redelegation):

The principle of delegation is also used within the body of delegates to further transfer or re-delegate to each other certain kinds of specialized authority within specific areas of discussion. (Ford, 2002: 6)

According to Ford, metadelegation allows proxies to transfer their proxy-agreements to other delegates in search of greater “policy area expertise” (Blum & Zuber, 2016: 168). This means that delegations are not only voluntary and flexible, but also transitive: Let A be an original voter, B and C two proxies, and X a policy issue. If A grants his voting power to B, and B transfers it to another proxy C, C then holds the entire voting power of A, B, and C, casting three votes on X.¹¹

The transitivity of the delegation chain is, however, likely to be quite weak for two reasons: First, the instant-recall principle can break the transitiveness of the delegation chain at any moment. Second, the authority to re-delegate is not necessarily conferred on proxies (Ford, 2002: 17). Intuitively, if B delegates A’s vote to C, it is questionable whether A does, or should, trust C at all. This becomes even clearer in light of the free choice of the proximity basis. Let us imagine that A chooses B as a proxy with regard to X based on their shared religious identity. In doing so, A is communicating that B is “her best hope for accurate representation” on X, a claim implicitly grounded in B’s religious beliefs (Green-Armytage, 2015: 202). Imagine that B then re-delegates his voting block to C, because C is an expert in X and thus represents B’s best hope for accurate representation on X. But what if C has a different faith than A and B? A would likely be disappointed with B’s choice and complain about the transitivity principle. This would be unsurprising, since A and B applied different proximity bases in making their choices about issue X. The more links in the chain of metadelegation, the more problems will arise.

Given its considerable epistemic value, however, metadelegation can and should be rescued. If no re-delegation is allowed, first-level proxies will likely become extremely numerous and be overwhelmed by their tasks. For this reason, Ford (2002: 6) claims that “the first order duty of all delegates is to act as generalists.” A single-level model of delegation recognizes neither that differences in expertise and talent matter nor that specialization and division of labor are required for complex tasks.¹² Metadelegation is therefore desirable, although it should not be unconstrained. Provisions can be included to enable original voters to exercise more control over the chain and prevent them for losing their political self-determination. One such measure would be to attach restrictions to delegation.¹³ Another would be the instant recall principle. Both of these measures can be extended to any level of delegation.

Some fear that metadelegation could backfire by undermining accountability, thus turning delegations into a black box that jeopardizes the transparency and security of the system (Nijeboer, 2013). As regards transparency, we can grant that citizens who delegate their votes should have a right to full anonymity and secrecy. At the same time, transparency about

¹⁰Blum and Zuber’s argument for the epistemic superiority of LD rests on such a premise (2016: 168). Valsangiacomo (2021: 8) further elaborates on LD’s anti-elitism.

¹¹Lewis Carroll proposed a similar model of transitive voting among representatives, in which candidates who received enough votes to enter parliament had to pass on their excess votes to candidates who had not yet reached the threshold (Dodgson, 1884).

¹²Green-Armytage (2015: 218) investigates whether voluntary delegations can enhance collective knowledge, concluding that they do “ameliorate the information problems associated with both traditional direct democracy and traditional representative democracy,” even more so if metadelegations are allowed.

¹³E.g., A might decide to prohibit the proxy B from re-delegating A’s vote, or specify that A’s approval is needed before B redelegates, or allow the metadelegation of A’s vote only a given number of times, etc.

proxies' decisions is dangerous, because it would seriously impede public scrutiny, making corruption less visible. In order to ensure the accountability of delegates to their voters, all formal decisions made by (meta-)delegates should be public.¹⁴ When it comes to security, voluntary (meta)delegation raises a dilemma: Secret ballots entail giving up the openness to external audits while, conversely, voter verification requires an open ballot. This is the main challenge for computer scientists and crypto-mathematicians, who are studying methods for overcoming this issue (Behrens et al., 2014: 53; Paulin, 2019: 73).¹⁵

Online deliberation

The term LD first appeared on the web in 2000, when its originator, John Washington Donoso (a.k.a. Sayke), posted some wikis about this new concept. He described LD as an algorithm that: "Takes a question as an argument, and returns a list of answers sorted in order of popular preference" (Donoso, 2003). In other words, LD was conceived as a procedure for helping a group of users to collectively work out answers to particular questions and to efficiently draft policy proposals. The hypothetical algorithm was straightforward:

Let's say I think you really know your stuff with respect to medical policy issues. Every time a question about medical policy issues is raised, I ask you (or my computer asks your computer) for a recommendation about how to answer that question. I might collect recommendations from multiple sources, pass some on to other people, review the ones I like, and answer the question accordingly – or I might just set up my Liquid Democracy software to automatically answer the question in the way you recommended. (Donoso, 2004)

This conception of LD is built on the pre-existing concepts of proxy voting and voluntary delegation, while including a new, discursive element: LD was not merely a voting scheme, but also included "mechanisms for proposing [and debating] bills that any member can use" (Kragg, 2003). LD was described as a "question-answering-algorithm" that employed dynamic recommendation among users in order to "chain recommended answers to questions" (Donoso, 2004). The goal was to find the optimal collective decision by "collaborative opinion gathering" (Paulin, 2019: 77).

Initially, Donoso (2003) explicitly linked this concept with the political realm, by defining LD as a "voting system." Subsequently, he distanced himself from these claims, admitting that he had not intended LD to be used in traditional government or aimed to reform "current governmental election methods" (Donoso, 2004). This retraction was due to Donoso's awareness that the "shift from answer recommendation to decision-making is a qualitative and non-trivial one" (Mendoza, 2015: 47). As Donoso himself points out:

People need to see what answers are being recommended to them before they decide how to answer the question at hand. With vote proxying, they can't do that! Vote proxying puts the power in the hands of the proxy – answer recommendation keeps the power in the hands of the people [...] where it belongs. (Donoso, 2004)

The Berlin section of the German Pirate Party notably implemented a "deliberative LD" through the online platform LiquidFeedback, a tool meant to improve the party agenda by

¹⁴Hardt and Lopes (2016: 4) call this the "Golden Rule of Liquid Democracy." However, as long as transparency about a proxy's decisions is guaranteed, proxies could still decide to remain anonymous.

¹⁵E.g., we can now decouple the voting identity from the real person, a procedure that makes verifiability and anonymity achievable simultaneously (Behrens et al., 2014: 46; Mendoza, 2015: 52).

dividing proposition making into three phases: proposal, discussion, and voting (Jabbusch, 2011: 58). With LiquidFeedback, a proposal can be initiated by any community member. It must then attain a given quorum of supporters, before entering the discussion phase. In contrast to most on-line communities, where anybody can directly express their opinions about anything, users decide whether or not to support the initiative: If they do, they are entitled to propose modifications; if they do not, they can launch a counter-initiative, which is, in turn, open to review by supporters. Only the initiator of the proposal or counterproposal can revise the text following the discussion and any change is once again subject to the supporters' approval. Many identify this "elaborately structured form of deliberation" as the central and most distinctive aspect of LiquidFeedback (Paulin, 2019: 77). Structured discussion aims to promote constructive feedback and criticism and it is expected to supplement (rather than replace) other forms of deliberation used to enhance democratic decision-making.

Existing definitions

The previous section presented a literature-based typology of the key elements characterizing LD, yet without discussing concrete definitions. In fact, it is uncommon to find explicit definitions of LD in the literature. Scholars often take the Pirates as a paradigm or simply describe LD as a mixture of direct and representative democracy. Hence, we lack a standard definition of LD that is accepted by researchers, which is somewhat disappointing because inconsistent use of the term prevents us from grasping the phenomenon of LD, appreciating its uniqueness, and exploiting its potential for change. In what follows, I discuss the two general approaches to describing LD, as well as four specific definitions, while addressing some of their most obvious shortcomings.

Often introduced with a reference to its extension and approached through the lens of case studies (e.g., Adler, 2018; Blum & Zuber, 2016; Jabbusch, 2011), LD is at times equated with the internal affairs of the German Pirate Party. Pointing at the real-world phenomenon that most paradigmatically embodies the idea of LD, while a useful definitional strategy, has its limitations: first, because ostensive definitions fail to identify the attributes of this new phenomenon; second, because, by not offering any insight into its meaning, this limited definition is unable to pick out other possible instances of LD. The association of LD with the Pirates makes it impossible to imagine where else the concept of LD could be applied. It also becomes too easy to discredit LD based on the Pirates' failed experiment or to dismiss new applications of LD as inconsistent with the Pirates' case.

Another commonplace is to regard LD as a balanced mixture of direct and representative democracy. For example, LD is defined by Donoso (2003) as "a voting system that migrates along the line between direct and representative democracy," by Green-Armytage (2015: 190) as "a middle-ground between these two choices," or again by Blum and Zuber (2016: 165) as "a procedure for collective decision-making that combines direct democratic participation with a flexible account of representation." These definitions are apt to identify the nature of LD as neither a purely direct nor a purely representative collective decision-making scheme. However, taken in isolation, these definitions fail to distinguish clearly between LD and neighboring concepts, for instance, semi-direct democracies with initiatives and referendums like Switzerland or the US.

Only rarely do scholars attempt their own definitions of LD, which tend to be quite context-specific and non-generalizable. Some of them are quite deep and differentiated, therefore lacking the requisites of coherence and parsimony outlined in *Methodological Remarks*. For example, Ford (2002: 4) enumerates six core principles of delegative democracy: (1) choice of role, (2) low barriers to participation, (3) delegated authority, (4) individual privacy, (5) delegate accountability, and (6) specialization by re-delegation. Component (1) corresponds to

the voluntary delegation principle, (3) to the proxy representation principle. Yet, an ideal type of LD can be constructed without the other features: (6) is derived from voluntary delegation principle, whereas (2), (4), and (5) are important democratic elements that are not unique to LD.

Similarly, Blum and Zuber (2016: 165) list four essential “components”: (1) direct democracy, (2) flexible delegations, (3) meta-delegation, and (4) instant recall. Despite precisely describing the process of LD, this list does not provide a parsimonious definition. Component (2) corresponds to the voluntary delegation principle, highlighting the capacity to distribute one's voting power flexibly rather than voluntarily. Yet, components (1), (3), and (4) can all be subsumed under (2) and are, at best, peripheral to LD. If I am free to delegate whenever I want, I can vote directly whenever I decide not to delegate. It also follows, as I argue in *Voluntary Delegation*, that proxies have this same right to delegation too. Similarly, the power to recall delegations can be derived from the necessity to preserve the voluntariness of delegations.

Whereas proxy voting is omitted from Blum and Zuber's basic model, Alger (2006: 4) considers “the allocation of proxies across representatives and the resulting voting weights for representative” to be the “most important feature of voting by proxy.” His discussion of the topic is prominently focused on proxy voting at the expense of the voluntary delegation principle, which is glossed over.

Finally, in his “program for making compatible the better features of direct voting with the practical necessity of some representation,” Miller (1969: 107–8) proposes four pillars, of which the third is precisely a so-called “provision for proxy as well as direct voting.” As argued in the next section, I consider my own definition to be an adaptation and refinement of Miller's first attempt to define a concept that, at the time, was still nameless.

CONCEPT FORMATION

The discussion so far has mapped out the conceptual history of LD and its existing definitions, showing the need for a minimal definition grounded in a parsimonious and coherent set of necessary and sufficient attributes that is neither too context-specific nor too abstract. The goal in what follows is to elaborate a definition that better meets these criteria. Thus, I will explain why “liquid democracy” is the most appropriate term, discuss relevant changes in the desired domain of application of this concept, and, finally, formulate my own definition.

Liquidity as designator

Although “liquid democracy” is a well-established term in the literature, the underlying concept has also been referred to as “proxy voting” (Miller, 1969), “delegative democracy” (Ford, 2002), “fine-grained representative democracy” (Kragg, 2003), “emergent democracy” (Ito, 2003), “viscous democracy” (Boldi et al., 2015), “pairwise liquid democracy” (Brill & Talmon, 2018), and “interactive democracy” (Brill, 2018). Since I wish to avoid ambiguity and other linguistic complications, I will keep using the term that is familiar in academic and ordinary language. LD is undoubtedly an effective label: It resonates better than “viscous democracy” or “emergent democracy,” it is more parsimonious than “pairwise liquid democracy” or “fine-grained representative democracy,” and it avoids unilaterally highlighting one specific feature of the concept, like the terms “delegative democracy” (with voluntary delegation) and “proxy voting” (with proxy representation). Moreover, Lucardie and Vandamme (2021: footnote 8) suggest avoiding the qualifier “delegative,” because “delegative democracy” is used, with a different meaning, in democratization studies.

The term LD clearly indicates a composite concept—a *democracy* qualified as *liquid*. That democracy is a fundamentally contested concept in political science and philosophy is well known; far be it from me to resolve these disputes. What interests me, after all, is the qualifier “liquid”: What is it that turns a democracy, however defined, into a *liquid* democracy? The next subsections delve deeper into this question. For the moment, it is enough to observe that the adjective “liquid” partly speaks for itself, as it indicates something that flows freely, fluidly, and without constrictions. It thus seizes the capacity of LD to switch nimbly between direct participation and political representation. “Liquid” could also indicate the denser flow of information or the more flexible political engagement of citizens. For example, according to Landemore (2020: 121), inclusiveness and openness to participation characterize “the distinct notion of ‘liquid’ representation.”

Extension and new domain of application

It is tempting to equate LD with its most famous real-world referent, namely the German Pirates, who let their members vote and discuss directly, or delegate at their pleasure. However, this might give the misleading impression that LD only refers to parties, or even one specific party. It also fails to account for why some thinkers are envisaging broader applications of LD beyond the Pirates, and even beyond party politics. In fact, political theorists are starting to understand LD as a potential voting scheme for legislative policymaking (e.g., Blum & Zuber, 2016: 163; Landemore, 2020: 121; Valsangiacomo, 2021: 1). Moreover, LD could be—and already has been—applied within the private economy in order to enable new forms of workplace democracy that include employees and/or stakeholders in corporate decision-making. At this point, equating LD with what the Pirates did between 2009 and 2016 is no longer sufficient, since it fails to provide an adequate foundation for investigating this broader phenomenon.

The domain of application¹⁶ of LD is hence shifting from methods of partisan agenda-setting to systems of collective decision-making, potentially including public law-making and corporate governance. This shift poses new challenges and opportunities for defining LD. On the one hand, the workplace and interparty politics clearly present a different decision-making context than intraparty agenda-setting. Whereas partisan decision-making occurs against the backdrop of comradeship and shared views, governmental law-making and corporate policy-making are inevitably marked by greater disagreement and competition. Furthermore, unlike parliamentary law-making, partisan agenda-setting does not lead to definitive social decisions. On the other hand, as the list of potential referents becomes larger, the task of finding the core, shared attributes of LD should become easier. It is in the light of these considerations that I next sketch my definition of LD, in order to identify the quintessential features of LD across all domains of application.

A new definition

Which is the relationship between the three core principles presented above? First, proxy representation is separate from the other two principles, because it merely refers to a perfectly proportional voting system where one delegation is enough to secure a seat in the open-seat liquid assembly. In other words, proxy representation is compatible with regular elections and fixed terms, without giving citizens the option to select different proxies for different issues and without offering online deliberation. Second, the voluntary delegation principle, while

¹⁶“The set of objects of which it is meaningful to ask whether they fall under the given concept or not” (List & Valentini, 2016: 6).

conceptually separable from online deliberation, is not fully independent from proxy representation. The extent to which it can be decoupled from proxy representation depends on the function that voluntary delegation is expected to fulfill. If the latter is used as a law-making scheme, then the two are inseparable, because, as shown in the previous sections, procedural inequalities must be allowed to prevent voting-power discrimination between actively voting and passively delegating citizens. However, if voluntary delegation is used to elect a fixed-seat legislative assembly, the two can be more easily separated. Here, the counting of the ballots still requires proxy voting, but once proxies are elected nothing requires renouncing of the ‘one member of the assembly—one vote’ rule with regards to policymaking (Ford, 2002: 13). Third, the online deliberation principle is clearly separable from the first two ideas, since online public deliberation can occur within the framework of traditional legislative assemblies and electoral/voting methods, as is the case with most existing e-participation platforms.

Given the separability of these three elements, the question arises as to whether they are all necessary to define LD. I will argue that proxy representation and voluntary delegation are individually necessary and jointly sufficient to define LD, whereas online deliberation is neither necessary nor sufficient. As mentioned at the beginning of this section, LD is expected to flexibly accommodate aspects of both representative and direct democracy. A political system is more liquid if citizens are more directly engaged in decision-making, without expertise and representation being entirely replaced. In this sense, all political systems can informally be called more or less liquid: e.g., a representative system is more liquid if it allows for initiatives and referendums, while a direct democracy is more liquid when citizens take cues from their parties when voting directly. Yet, LD formalizes liquidity through two specific principles: proxy representation and voluntary delegation. By contrast, online deliberation does not add liquidity of this kind, but is rather a different, standalone principle. Therefore, I propose to redefine LD as a decision-making scheme based on voluntary delegations and proxy voting, which allows for a systemic and flexible mix of direct and representative democracy. It is the option of voluntarily delegate and weighted voting that makes LD unique, groundbreaking, and, of course, liquid.

This definition does not imply that online deliberation, or deliberation more generally, is irrelevant to democratic theory. Nor do I intend to suggest that LD is incompatible with various forms of deliberation. On the contrary, LD could benefit from the vast and variegated literature on deliberative democracy. My argument is simply that if we were to construct an ideal type of LD, it would be based only on voluntary delegations and proxy voting. Such an ideal type or minimal definition does not aim to capture actually existing LDs, but rather approximates them by accentuating its essential features and downplaying its non-essential ones. Any concrete case of LD will be more complex and can, and probably should, contain other important principles, including deliberation.

CONCEPT EVALUATION

Although this definition is heavily indebted to Miller's work, it has some advantages over Miller's conception. To begin with, the literature review I drew upon is obviously more comprehensive: Since Miller was a precursor of the idea of LD, I was able to make use of a greater range of material published in the meantime. Consequently, I was able to distinguish more clearly between proxy and direct voting, which Miller implicitly regarded the same. Finally, I would claim that “voluntary delegation” is a more adequate term than “direct voting” for highlighting LD's unique capacity to let voters freely and flexibly decide when, why and how to participate in collective decision-making.

The newly refined definition meets the methodological requirements laid out in *Methodological Remarks*, since it stems from a classical conceptual analysis aimed at achieving

coherence and parsimony. It is abstract enough to be applied in different research projects, without broadening and straining its meaning (Sartori, 1970: 1034). It can also help us to draw useful distinctions in real life, picking out which objects fall under the concept of LD.

My definition is useful for identifying what does not count as LD. Although it can be considered as an example of democratic innovation, LD is not a catchall term for digitally enabled civic experiment. LD is not just any tool that boosts citizens' participation via online (blockchain-enabled) direct voting or facilitates online deliberative processes in large groups. Without voluntary delegations and proxy voting, a decision-making process does not qualify as LD.

For the sake of clarity, here are a few examples: The Australian party Vote Flux adopted a procedure akin to LD, namely Issue Based Direct Democracy (Lander & Cooper, 2017), which involves swapping votes instead of delegating power and is thus arguably different from LD. Similarly, the software ProxyFor.Me was developed as a refinement of existing LD-enabling tools, but ultimately replaced delegation with automated matches (Raney, 2017). In 2012, some sections of the Italian *Movimento 5 Stelle* experimented with LiquidFeedback (Serafini, 2012), but the Rousseau platform currently employed by the party is not an example of LD. Some companies, like nVotes (Ruescas & Deseriis, 2017) and Follow My Vote (2015), have expressed interest in the concept of LD, but never publicly moved to the next step of prototyping and including these new features in their software.

With my new definition, it is possible to clearly identify instances of LD. For example, a handful of open-source programs have been or are being developed to implement LD, like Adhocracy+, LiquidFeedback, and Sovereign.¹⁷ Several Pirate parties around the world have employed LiquidFeedback to set their party agenda in a liquid-democratic way.¹⁸ The Australian Pirates intended to develop a prototype tool called Polly, but nothing came of it (Pirate Party Australia 2016). As of 2019, the developer Aeternity announced a collaboration with the Uruguayan *Partido Digital* for the development of a liquid-democratic platform (Covadonga, 2019).

Other parties—like the Swedish *Direktdemokraterna* (2020), the Argentinian *Partido de la Red* (TED 2014), and the Spanish *Partido de Internet* (Pastor, 2015)—have used these and other programs to experiment with LD, albeit not precisely for partisan decision-making. In fact, they relied on the principles of LID in order to simulate a direct democracy able to bypass pure representative systems: Using a scheme of delegations and proxy voting, the party base determines its positions and elected public officials are compelled to vote accordingly. According to its statutes, the non-partisan (*Lista Partecipata*, 2008) offers consulting services to parties in Italy with similar goals.

In the private sphere, Google has been experimenting with LD in the US for about three years. Via a web application, GoogleVotes, integrated into their internal social network, Google+, Google employees have the chance to participate in decision-making via delegations and proxy voting (Hardt & Lopes, 2016). The Italian television talk show *Servizio Pubblico* used LiquidFeedback in one of its segments, enabling viewers to develop public-policy suggestions, which were later discussed with candidates running for prime minister (*Il Fatto Quotidiano*, 2012).

At the governmental level, the German district of Friesland has been using LiquidFeedback to increase civic participation since 2012 (Landkreis Friesland, 2016). Citizens can propose, discuss, and vote on various proposals via the platform, in line with the basic principles of LD. The most popular proposals are mandatorily discussed by the city council.

¹⁷See appendix for more details.

¹⁸In Belgium, Brazil, Catalonia, Germany, Italy, Serbia, Sweden, Switzerland, and the United Kingdom (Cammaerts, 2015; Morisse, 2012).

Finally, the definition proposed here could be used to come up with new applications of LD, for instance in national, regional, or local governments. There is considerable leeway when it comes to the possible institutionalization of LD, and normative theorists should engage openly and clearly with all possible hypotheses. Should the liquid assembly complement or replace existing institutions, such as the regular parliament (or one of its chambers)? Would this liquid assembly be permanent or *ad hoc*? If *ad hoc*, should it be mandatory or voluntary? Should its decisions be binding or merely advisory? These, and many other questions, both practical and normative, remain open.

CONCLUSION

I have argued that LD is a decision-making scheme characterized by liquidity—i.e., the systemic and flexible mixture of direct and representative democracy—which embodies the principles of voluntary delegation and proxy voting. This conclusion was reached by means of classic conceptual analysis, an approach that has been criticized for its inability to account for the fuzziness that unavoidably affects social science concepts (e.g., Laurence & Margolis, 2003: 27; Goertz, 2006: 3–5). In fact, with its rigid view of concepts and classes, this approach tends to see categories as dichotomous and mutually exclusive, treating all instances of a concept as equally representative. Given the messy, unstable, and disputed nature of concepts in the social sciences, this is widely regarded as a significant limitation of the classic theory of concepts. Be that as it may, I do not think that we can or should do away with the need to define new and potentially disruptive phenomena like LD, by asking what it is and what its instances have in common. It is futile to ponder to what extent X is liquid democratic, if X does not even belong to the class of things to which LD applies, let alone if X does not qualify as a case of LD in the first place. The classical theory certainly encounters difficulties explaining borderline cases falling into a gray zone between neighboring concepts. Yet, it seems odd to worry about these marginal cases, when it is not even clear what a proper example of LD looks like. Furthermore, applying the classic theory does not mean creating rigid definitions, forever unerasable from our scientific vocabulary. To cite Sartori (1984: 54), I am not “legislating” over the concept of LD, but rather advancing an interpretation and plausible definition, in the hope that other scholars will find it useful. I make no pretense that this is the only definition possible—let alone the right one. My analysis has shown that the concept of LD naturally displays a definitional structure; I shall leave it to other researchers to demonstrate that we would be better off with a prototype structure of the concept of LD instead.

Throughout this article, I have argued in favor of a rigorous conceptualization of LD based on the potential benefits for democratic theory, claiming that LD is an innovative, timely, groundbreaking, and disruptive idea—as if this were obvious. On the technological side, LD is indeed highly innovative, as evidenced by the growing interest of computer scientists. One might therefore be tempted to accuse LD of “epochalism,” namely the belief that something is desirable solely because of the new technological components it entails (Dege, 2016). This conclusion is, in my opinion, unwarranted: LD is worth researching not because of its technological dimension, but because of the institutional changes *and* normative features that this technology potentially enables. The potential institutional changes are evident, even though it remains unclear how LD could effectively be integrated into existing democratic systems. The potential for theoretical-normative innovation is attested by recent research in political philosophy, which has scrutinized the extent to which LD can positively impact citizens’ participation (Landemore, 2020), popular sovereignty (Lucardie & Vandamme, 2021), and political representation (Valsangiacomo, 2021). Injecting LD into existing democratic systems could help address

various challenges and thus resettle the field of democracy studies. It could improve issues of trust and legitimacy by opening the system to more participation, without burdening citizens, ameliorate representation by allowing for a more genuine and trust-based relationship between citizens and elected politicians (proxies), enhance the epistemic quality of collective decisions by including more expertise, without falling into the traps of elitist democracy and technocracy. While this article has not proven these hypotheses, by stipulating a clear-cut definition and by providing a minimal model or ideal type of LD, it provides a sound basis from which such theoretical enterprises could be conducted in the future. That is why the present definition has significant practical value for political science and philosophy alike.

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ORCID

Chiara Valsangiacomo  <https://orcid.org/0000-0001-7675-4974>

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AUTHOR BIOGRAPHY

Chiara Valsangiacomo is a Ph.D. student within the Doctoral Program Democracy Studies, Chair of Political Philosophy, at the University of Zurich, Switzerland. Her dissertation is provisionally titled “Liquid Democracy: An Attempt to Justify a Nascent Model of Democracy.”

SUPPORTING INFORMATION

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