

SELF-EFFICACY AS A FACTOR IN THE EVALUATION OF E-PETITIONS

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Abstract

E-petitions are seen as one response to a perceived decline in public trust of political institutions and the associated symptoms of disengagement. In this paper, some current research into e-petitioning in Europe is reviewed, and the need to understand the context behind the expectations and perceptions of external actors (citizens and petitioners) in the process is considered. Social Cognitive Theory (SCT) is presented as an approach which broadens the analysis beyond perceived outcomes and gives prominence to the concept of self-efficacy, and parallels are drawn with citizens' belief in their ability to successfully interact with the political system as a whole. A diagram with an idealised flow is presented and used for consideration of the points at which evaluation data can be collected in this context.

Keywords: eDemocracy, petitioning, digital democracy, e-participation, evaluation, self-efficacy, social cognition

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1 Introduction

A traditional way for the general public to influence decision-making is by organising a petition. Petitioning is a simple yet effective tool that provides an excellent first step for citizens who want to engage with democratically elected assemblies, from Local Council to the European Parliament. E-petition systems have already been introduced in some Member States both at national and increasingly local levels in order to make it easier to gather signatures from a wider audience.

One such e-petitioning system is EuroPetition developed by Public-i², which will be a trans-European Local Authority service, providing distributed citizen engagement and interaction with the European Parliament's PETI Petitions Committee and the Commission's Citizens Initiative online procedures using a proven open-source UK e-petitions service and experience, and building on the innovative and state-of-the-art Web 2.0 applications from the LEGESE³ and Citizenscape⁴ e-participation projects. The project will pilot trial the coordination and submission of cross-border and pan-European Citizen Initiatives and petitions in 5 regions in Spain, Italy, the Netherlands, Sweden and the UK, potentially involving over 4.9 million citizens across the EU, strengthening and broadening citizens' participation in democratic decision-making.

As EuroPetition will be used in a number of cross-border decision-making cases it will be relevant in promoting e-participation not only in the context of the Lisbon Treaty (once ratified) but also in many legislative and decision-making processes and the benefits of this e-participation could be also felt by the wider online community. EuroPetition will include social networking technologies and practices to add to the power and utility of the service when used in a political context. Online collaboration sites have been successful in recent years, especially among the young, so EuroPetition will include various tools to enable people with the same interests to form groups which traverse social, administrative or geographic barriers, and help these groups to participate in decision-making on specific EU policies.

Both the objectives and the actors are fairly typical of EU projects in this area. The project's high level objectives can be summarised as to demonstrate the *acceptability* and take-up of the system over a realistic period of time, to demonstrate the *impact* on the democratic processes, through increased citizen participation and to establish the factors that will support sustainable operation (ie viability) of the service (ongoing funding, political support etc).

For our purposes, the main actors in the process can be placed in two groups:

- *Internal actors:* (a) *Officers of the assembly* are responsible for the operation of the system; generally, *Forum Moderators of any related* online discussion would be a subcategory of officer. (b) *Elected Representative* (and their support staff) who respond to petitions individually and collectively.
- *External actors:* (a) *Petitioner:* that is, the person (or group⁵) that initiates a petition after identifying an issue and sees it through to final feedback and outcome. (b) *Citizen:* that is, the person who is entitled to sign the petition. Eligibility rules will vary, raising questions of

² <http://www.public-i.info>

³ See <http://www.legese.org>

⁴ See <http://www.citizenscape.org>

⁵ Some believe that community groups and NGOs act as an enabler to support individuals or communities to identify, research and articulate issues, particularly where engagement is low.

identity and authentication which are not discussed further here. Citizens can be broadly divided between those who are *participating* in a petition by signing it, and the *non-participating* majority.

This paper examines approaches that enable more to be understood about the *external actors'* intention to engage or not with an e-participation system like EuroPetition, starting with a brief overview of the current body of research in this area.

2 The place of e-petitions in the democratic process

2.1 Democracy, participation and e-petitions

“...with the spread of Information and Communication Technologies, a new practice has come into force, consisting of aligning the practice of petitions and the use of Internet technologies. This has led to the implementation of appropriate technical components... today citizens have more instruments to interact with the institutions, to make their voice heard and, eventually, to take part in the policy-making process” *Daria Santucci* [15]

Many advanced industrial democracies have adopted reforms designed to ‘transform’ established representative democracies into more participatory democracies with the aim of confronting a perceived decline in public trust of political institutions and the associated symptoms of disengagement, and e-petitioning has advanced furthest[10].

Political scientists have placed petitioning between pure representative democracy and direct democracy (which bypasses representatives altogether), in a separate category, *advocacy democracy* [2], where the participation activities are directed towards influencing the decisions of elected representatives, thereby mitigating the risks of weakening existing democratic institutions. On the other hand, since the policy impact is indirect (mediated by representatives), perceived fairness and openness in the process can be as important as the actual outcome.

Although informal (unofficial) petitions arose first, modelled on previous paper-based processes, the place of formal legally mandated petitions in the political processes across Europe is now assured, if varying a little in detail[15], and there is room for further evolution: for instance the opportunities offered by the internet of providing background information on site or through links to external sites are still not generally taken by e-petitioning systems [9]. E-petitions can also occupy a number of places in the political process [10] and petitions can be seen as straddling the boundary between formal and informal political processes.

Online petitions have now been used for a number of years at national, regional and local authority level [9], and their role continues to evolve. For instance in England & Wales, online petitions are being further built into the political system, at least at a local level, as part of the “Local Democracy Economic Development and Construction Bill” currently before Parliament⁶[7]. In Spain, petitions have at best a semi-formal role with regions implementing petitions on a pilot basis without a supporting legal framework and Sweden is somewhat in between with a legal right to petition, but no formal duty on local councils to consider the petition. The success of e-petitioning systems has not been uniform: in Norway for example, activity was low [9].

⁶ <http://services.parliament.uk/bills/2008-09/localdemocracyeconomicdevelopmentandconstruction.html>

At the European level, citizens can already petition the European Parliament through its Petitions Committee (PETI)⁷, albeit over a restricted range of subjects, limited to rights as a European citizen as set out in the Treaties, environmental matters, consumer protection, free movement of persons, goods and services, internal market, employment issues and social policy, recognition of professional qualifications and other problems related to the implementation of EU law. The current system is not aimed at supporting a mass expression of opinion, rather, the addressing of grievances. PETI is currently oriented towards a paper-based process, but an online form for submitting petition requests is offered⁸ and the process is supported by a back-end administration system.

The draft 2008 PETI report notes that 1886 petitions were registered, compared to 1506 for 2007⁹, which in itself was a 50% increase on 2006; of these, 40% were declared inadmissible, compared to 30% in 2007. According to the report, “the largest cause of inadmissibility relates to the question of competence and its corollary, subsidiarity” - ie issues that should have been raised nationally. It is possible that PETI could benefit if a method for reducing the levels of inadmissible petitions since with this level of inadmissible petitions. As a result of the high level of rejected petitions, it is likely that perceptions of fairness in the process are particularly important but further work is still required to understand the European dimension; this will be explored further as the new Parliament comes into place after the 2009 elections.

A distinguishing characteristic of many formal e-petitioning systems (but not of PETI's) is the proactive role assembly officers play in advising petitioners on the wording of a petition to ensure that it is within the remit of the body to be petitioned and in shaping the petitioner's expectations of the system, however little work has been done in understanding this potentially crucial role [9].¹⁰

Finally, it is necessary to remember that the participants in the petitioning process and e-democracy generally, have been shown to be generally male, educated and older than the general population ('the usual suspects') [2] [9]. Levels of internet access may also be plateauing [13]: it can be argued that the accountability brought about by transparent processes is can be a good in itself, and does not require the participation of the whole of society, but even if this is accepted, it would be useful to understand the factors behind the decisions made by individuals (or groups) whether to participate in the political system by creating, or signing a petition.

3 Evaluation design

3.1 Understanding the factors behind take-up

Later on in this paper, we consider the points at which evaluation data can be collected, and the appropriate techniques to use at each. First though, we look at understanding the factors that lead to individuals' decisions on whether or not to participate in the process: this section looks at Social-

⁷ <http://www.europarl.europa.eu/parliament/public/staticDisplay.do?id=49&language=EN>

⁸ <https://www.secure.europarl.europa.eu/parliament/public/petition/secured/submit.do?language=EN>

⁹ <http://www.europarl.europa.eu/oeil/file.jsp?id=5595442>

¹⁰ It is of course important to ensure that the unelected officials do not act as a block to submission of petitions. For instance, in their recent report on their petitioning system, the Scottish Parliament emphasises that “our clerks cannot prevent a petition being lodged. Only the Committee can rule on admissibility.”

<http://www.scottish.parliament.uk/s3/committees/petitions/reports-09/pur09-03.htm> (Para 174)

Cognitive Theory as an approach that could provide a useful addition to the evaluation process. This paper works within the emerging consensus on e-participation evaluation [12] also recently expressed in a DEMO-Net report [10].

Theoretical frameworks for research on technology impacts can be broadly aligned with quantitative and qualitative research traditions. Quantitative approaches, typically derived from experimental psychology, strongly influence *technology acceptance* models. Qualitative research approaches on the other hand are typically derived from sociology or anthropology, and strongly influence research on cultural and organisational factors, especially in the use of collaborative technologies.

A widely used model of software acceptance that goes beyond basic usability and accessibility is the Technology Acceptance Model (TAM). The model derives from behavioural psychology and identifies a number of factors that are claimed to predict decisions to use software, in particular:

- Perceived usefulness: the degree to which a person believes that using a particular system would enhance his or her job performance.
- Perceived ease-of-use: the degree to which a person believes that using a particular system would be free from effort.

As a quantitative approach, the model treats the concepts of usefulness and ease-of-use (usability) as measurable variables, validates these measures through experiment, and proposes that they are determinants of user action. The model has been extended several times to include a range of other factors, such as the ‘social influence’ of peers and superiors in organisations [5], or beliefs about self-efficacy, enjoyment and goal orientation[16].

In contrast with TAM, Social Cognitive Theory (SCT) broadens the analysis beyond perceived outcomes and gives prominence to the concept of *self-efficacy* – defined as beliefs about one’s ability to perform a specific behaviour. Expectations of positive outcomes of behaviour are meaningless if we doubt our capacity to successfully execute the behaviour at all; conversely, previous bad experiences can create a self-reinforcing cycle of expectations of negative outcomes [6]. It follows that coaching and encouragement can be as important to acceptance as the application interface or a marketing campaign.

The concept of Computer Self-Efficacy (CSE) is used to make individuals’ judgement of their capability to perform a computer-based task central to the analysis [5]. These have been used in understanding the decisions of individuals to use an application, generally in a institutional or business context, rather than within a democratic system. As well as applying CSE to internal actors (council/assembly officers, elected representatives and their staff) which would be seem a straightforward application of CSE, it seems plausible to use it on the decisions of the external actors (petitioners and citizens) to submit and to sign or discuss a petition online respectively

The CSE model provides standard questionnaire statements that can be used as indicators for evaluation criteria, grouping questions around self-efficacy (what’s holding me back), expectations of performance outcomes (what will I achieve), personal outcomes (how will I feel), affect (why I like it), anxiety (what I am worried about) and frequency of use of the application [6].

It is important to be aware that in the context of political processes there are some potential weaknesses in both SCT and TAM-based approaches, which indicate that they cannot be used as the sole basis for an evaluation framework:

- The organisational focus: although the petitioned assemblies are organisations, the external actors are not its employees, and the motivations and commitment shown may be very different;
- The definition of ‘performance expectations’ or usefulness may not be not wide enough to include factors that participants in a political process consider relevant.

Another challenge is that it is entirely optional to use the system, and the interaction can be brief, as no long term commitment to learn an application is needed to sign a petition¹¹; on the other hand there is potential for longitudinal studies to identify petitioners and citizens who repeatedly use the system.

Previous studies of e-petitioning have focussed on the technical and institutional perspectives [9] but the perspectives offered by a social-cognitive approach give us a motivation to start adding societal aspects to the evaluation: firstly, by allowing us to judge the efficacy-related factors behind the decision to use the e-petitioning system to participate in a democratic process. Secondly, to identify the impact on fairness of the system as perceived by petitioners of (a) any delays between stages in the process and (b) the role of assembly officers, particularly at the crucial initial stage of initiating the petition. If the focus of our work is the external actors, that is the petitioners and citizens who use the e-petitioning system, there may also be parallels between CSE and citizens’ belief in their ability to successfully interact with the political system as a whole.

As a result of this analysis it is possible to identify a number of research questions which will inform and enrich the evaluation. In the table below, research questions are listed, and we identify who will be asked (the choice of the timing of and the evaluation instrument used are not considered here).

¹¹ Unless the web browser that is presenting the petition is the application?

	Project Objective	From data ¹²	Officers	Representative	Moderators	Petitioners	Citizens
Research questions							
RQ1. As well as informal guidance on wording etc, how much support should be given to petition owners in drawing attention to their petition?	Acceptability, Impact		✓			✓	
RQ2. How will success of the social networking (Facebook) widget be measured? What factors affect the actual take up of social networking (Facebook) widgets	Impact	✓				✓	✓
RQ3. How inclusive has the new system been?	Impact			✓	✓	✓	✓
RQ4. Are there any success factors relating to local political cultures – eg legal formality of the petitions, integration with other political processes	Acceptability, Impact	✓	✓	✓		✓	
RQ5. Does the length of the signatory phase make a difference?	Acceptability, Impact	✓				✓	✓
RQ6. How do the participants see the process in terms of expected and then perceived fairness, and whether the process worked as expected	Acceptability, Impact			✓		✓	

3.2 Identifying points for evaluation

We can now move to identify data collection opportunities and requirements embedded into the EuroPetition system itself (the principles would apply for most e-petitioning systems).

The summary flow diagram below illustrates a four-stage model of the processes involved during the life of an individual petition¹³, to allowing useful points at which evaluation could be added to be identified. Note the way this diagram brings out the importance of officers in supporting the petitioning process, with the petitioner only having a limited role between submission and completion, particularly if they are not involved in moderating or facilitating a parallel online debate.

All the questions below help to understand the democratic impact of the petition, and those that give an indication of take-up will also be used for evaluating acceptability.

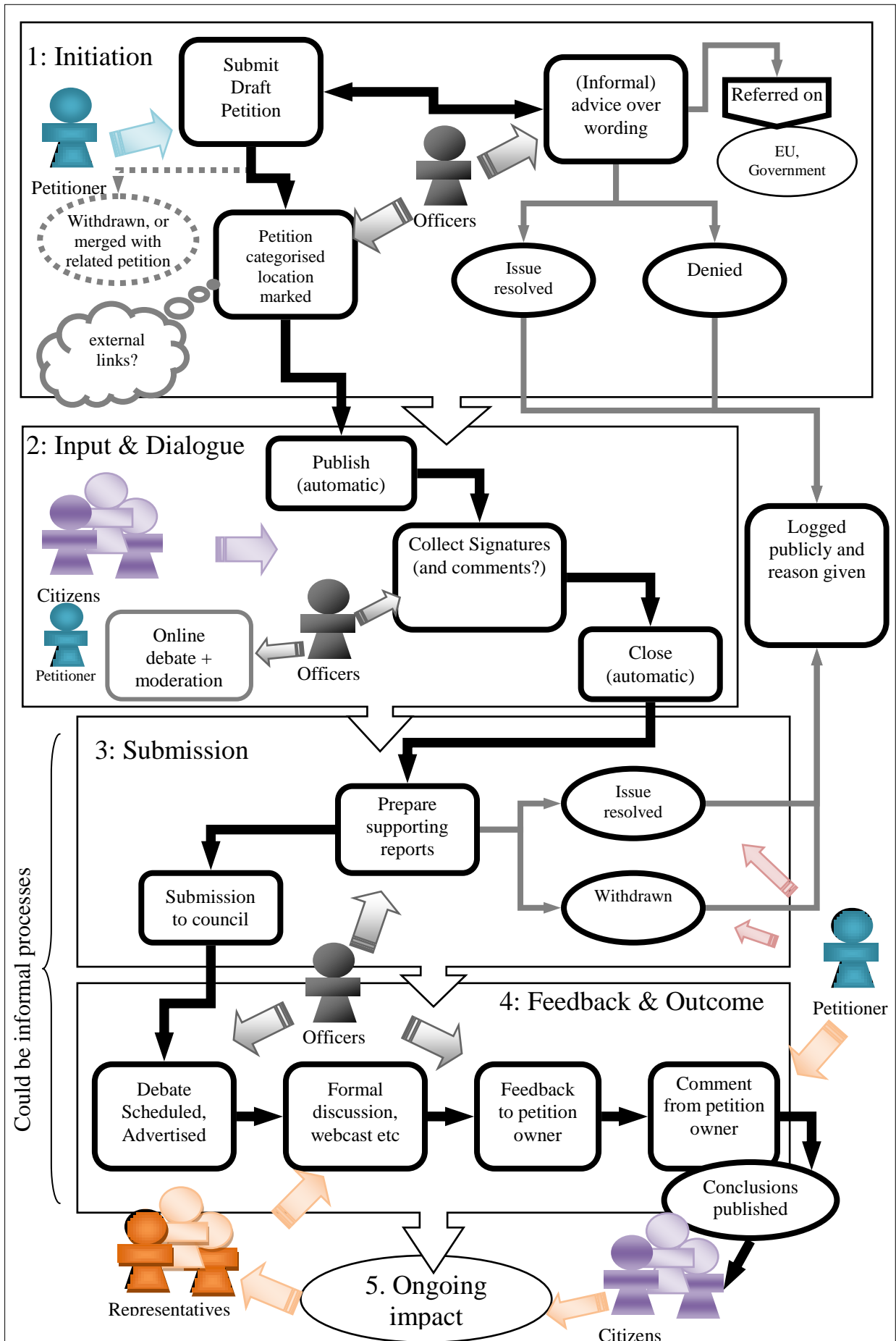
In line with standard practice, a range of instruments are available for this kind of work, *questionnaires* and *focus groups* will be the main route to gathering of qualitative data.

¹² Database, application log and manual tracking by system administrators (eg on a spreadsheet). We have not chosen to treat the system as an actor in its own right, *pace* Actor Network Theory.

¹³ This could be seen as focussing on the last two phases in Santucci's [15] cycle of (1) Petitioner identifying the lack/gap, (2) gaining the knowledge to have the confidence to submit the petition (3) performing the petition and finally (4) endorsement of the outcome

Reviewing the flow diagram on the next page, it is possible to identify the points at which CSE-related data can be gathered and from there to link the actors to the data requirements and identify the most appropriate instrument to use:

<i>Actors</i>	<i>Stage at which data is gathered</i>	<i>Purpose</i>
Petitioner	On submission of petition	Demographics, motivations and expectations of petitioner, existing engagement with the political system
Participating Citizens	After signature submitted or debate participation	Demographics, existing engagement, perceptions of quality of debate, expectations How was the petition found, actions after signing the petition
Forum moderators	After petition closed (or at the end of the project?)	Establish perceptions of usefulness of debates and lessons to learn (eg on moderation, anonymity)
Petitioner	On completion of petitions. Focus group of peers after tool has been operational for a suitable period	Perceptions of the process, Whether expectations have been met
Assembly Officers, process facilitators	Meeting at end of project, plus one or two at other key stages	Understand context of processes
Elected representative (and their support staff)	Meeting at end of project, plus one or two at other key stages	Establish perceptions at the political level



4 Conclusion

E-petitioning is probably the one of the most mature areas of e-participation that is actually impacting on political processes. This paper started by noting that petitioning has proven to a simple yet effective tool that provides an excellent first step for citizens who want to engage with the democratic institutions at local, regional or national level.

The focus was on evaluating the motivators and de-motivators as perceived by individual ‘external’ actors, the citizens and petitioners. It is recognised that individuals (particularly petitioners) act in a social context, for example as members of advocacy or community groups, and also that e-petitions seems to work best when shaped in dialogue with officers or clerks of the elected assembly.

This paper presented Social Cognitive Theory (SCT) as an approach which broadens the analysis beyond perceived outcomes and gives prominence to the concept of *self-efficacy* – defined as beliefs about one’s ability to perform a specific behaviour. Expectations of positive outcomes of behaviour are meaningless if we doubt our capacity to successfully execute the behaviour at all. There are obvious parallels between CSE and citizens’ belief in their ability to successfully interact with the political system as a whole.

In this brief discussion, there are a number of areas that have been excluded, implicitly or explicitly. One is evaluating the impact on democratic processes and outcomes of the e-petitioning system. The issues particular to creating and managing trans-European petitions are not considered, in particular the management of similar petitions across multiple languages [8]. Another area not considered is the emerging issues around establishing the identity and authorisation of signatories where action is mandated when a target number of signatories is reached.

Due to limitations in the scale and nature of the EuroPetition project including the fact the application is still being developed, long term, high-volume studies of the system in operation are not feasible meaning only basic quantitative analysis is possible (a common problem with e-participation projects [14]), but this work should at least contribute towards a framework for a more complete survey in a future study.

It is hoped that adding social-cognitive aspects will add a further dimension to the understanding of take-up of e-participation applications ‘in the wild’ with recognition of different contexts that each of the classes of actor operate in.

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