The Opensource Democracy Paradigm

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This essay offers a discussion on opensource software development, elaborating on the fundamentals of what it means to develop via opensource. I then offer the relationship between software development and the development of law and policy in a democratic decision making process. Of particular interest are indigenous communities and the possibility of an opensource model in raising community awareness and participation regarding issues pertaining to the development of indigenous lands. I suggest a few possible models, namely Cybersyn of Chile under the Allende administration and the Zapatista technological revolution of Mexico, both of which pertain specifically to indigenous groups and aims at the restoration of democracy. Lastly, the ubuntu linux project is of great use in terms of providing a contextual analysis of opensource as a possibility in meeting the limitations of indigenous communities.

The global community is a changing place. As social expansion and networking continue to occur, slowly linking the human species nation by nation, city by city, there remains inequality. One might assume that with such a diverse online community, the needs and situations of diverse human populations would slowly become realized, aiming towards the abolishment of unequal treatment and opportunity. Unfortunately, this is not the case. Technology remains closed to much of the developing world with only 12% of the planet having access to the internet by the end of 2003, compared to Sweden, one of the most technologically forward nations where 82% had internet access, climbing to 90% by removing those 55-74 years of age (Krakowski 319-330). This is largely due to the implications of technological development within the developed world. Software licensing has restricted access to software solutions due to extremely high costs associated with attaining software. Even upon purchasing a desired application, one does not have access to the source code nor do they have the ability to modify and redistribute the source code. This
has resulted in a homogenous software development system which only addresses the immediate needs of its limited target group. In opposition of these principles, a movement towards opensource has been a recent topic of discussion within the software community, providing free access to the source code with the encouragement of modification and redistribution, allowing for improvements and the needs of its users to be addressed. This further allows for a diversification of its user group, providing a dynamic system applicable and accessible to any population. I will first define opensource in greater depth and how the concepts therein encourage democratic participation between the development team and the user group. This will then be correlated to the early socialist internet in Chile under the Allende administration before his forced removal, as well as to the developing world at large. A number of case studies are available, many current and ongoing, which will serve as models in the extension of opensource principles into the democratic decision making process. Lastly, I will present my thesis that opensource is of particular use to indigenous culture, providing an inclusive forum, mediating communication between representatives of indigenous peoples, government interest groups, and industry leaders concerned with the development and possible exploitation of indigenous lands.

Before continuing with the premise of an opensource democracy and its implications, it is important to first clearly define this term and its origins. What many political backgrounds may not realize is the history of this term in software development, where many independent programmers began to realize the harmful effects of a homogenous software industry which was closed to its users, producing a result which reflected only the economic desires of itself and the needs of a specific target group. While for the most part this might act to meet those narrow needs, certainly a time would come when such a task would not be possible given how widespread the technology would become, facing a diverse audience who was never included in development in the first place. Such was quick to become the case. The early pioneers of opensource provided the source code for their software free of charge and more radically, encouraged modification and redistribution. This quickly led to the rather
novel concept of a community development team which could collaborate on software projects over large geographical distances (Weerawana). On the most fundamental level, opensource acts as a natural feedback loop which is dynamic to the changing pressures of its audience, internally reflected on the project team, thus capable of efficiently rewriting any error or defect in the source code. Moreover, while this diversification of the development team will result in greater representation of needs as addressed in the code, there will also exist the possibility of modifying the software free of charge with utmost efficiency to be applied to the particular situation in question.

If we now consider a complex analogy. Let us think of the source code as provincial legislature or policy regarding unequal representation among the leadership of the province. In one sentence I have essentially substituted “software code” for legislature or policy. Assuming a collaborative opensource system, a development team would begin to write the new said code, or policy. Before being published or formally proposed, this new legal document would undergo modification and redistribution as it gains diversity and begins to accommodate the needs of all who are on the development team. With any final issues or concerns resolved, the new policy is then published where it becomes public property. With a much larger and more complicated audience, it will naturally undergo some modification, though likely little with an already well-reflected document. Therein lies the feedback loop as the development team is also public access, capable of receiving the input of the public audience it serves and further accommodating these newly emerging needs. Such is the premise of an opensource model as applied to the development of policy in a democratic, yet efficient procedure accommodating the ever changing needs of those it serves.

The aforementioned was just a simulated model; however, we are fortunate to have the ability to reflect upon a similar system as occurred in Chile under the leadership of Stafford Beer with the invention of Cybersyn in the 1970’s. The goal for Beer was to establish a link between voters, workplaces, and the government through an entirely novel international communications network (Beckett). This would essentially act to transform the relationship
between these otherwise hierarchal differentiated entities, to be grounded on the same plane, capable of nearly instant communication and feedback as to the economic health of the nation. As a socialist state running very much on the principles of Marxism, President Allende deviated from the norm in terms of centralization, instead choosing a more geographically decentralized economic and industrial approach, capable of effective communication through the prospects of Cybersyn (Beckett).

“...A new communications system reaching the whole spindly length of Chile, from the deserts of the north, to the icy grasslands of the south, carrying daily information about the output of individual factories, about the flow of important raw materials, about rates of absenteeism and other economic problems”. (Beckett)

This kind of communication was not only revolutionary at the time it was to be implemented, but could very well be considered so by today’s standards, in particularly when discussing developing nations where their capabilities are very much along the same lines faced by Chile during the 1970’s. Having a president who is informed on such statistics as the highest and lowest yielding factories or the rural communities facing the highest rates of absenteeism is revolutionary and applies a certain efficiency in addressing these issues where nearly instant feedback is possible. Moreover, all those connected to this network would be privy to this knowledge, providing a dynamic incapable where one could observe all other components of the network extending into many levels of society (Medina). Unfortunately the prospects of such an innovation were never realised. On September 11th 1973, the Presidential palace of Allende was bombed by a CIA funded coup operation, resulting in the successful removal of President Allende and the forced exile of Stafford Beer. This was the end of Cybersyn, which was physically destroyed by the coup.

While the possibilities of Cybersyn were never actually demonstrated, there has been a recent trend in the developing world where the use of opensource software and more recently, democratic principles propagated
therein, have been on the rise. A growing expression of interest to “willingly engage with the underlying code of the democratic process could eventually manifest in a widespread call for revisions to our legal, economic, and political structures on an unprecedented scale” (Rushkoff). Such revisions are freely encouraged under the assumptions of opensource democracy where policy is open to public debate and revision in the collaborative effort to resolve a legal policy which is reflective of the needs and concerns of those to whom it applies. Rushkoff continues to provide one of the most important points in considering social justice and economic progression, that indeed such entities are only measured through the number of people able to participate.

It is now important to establish the role that software and IT technology may play in this development. Essentially, the network (such as Cybersyn) may act as the forum for which people are connected, and thus, the forum in which policy is discussed on a public and non-discriminatory platform. It is unfortunate that the developed world has largely been structured on the premise of competition; such is the case with any capitalist state where discussions are in terms of economic gains or losses rather than social encouragements or discouragements. With little economic influence, a system which is freely open to collaborative efforts in attempt to reach a social or political resolution rather than one of economics, will naturally encourage a degree of inclusiveness, resulting in an increased awareness of diversity of opinion in a system that can further accommodate such differences. So how does this pertain most specifically to developing nations then? With political unrest and instability, often finding themselves under the status of a failed state, such a system may very well be the answer to including those whom it directly affects. If every village and rural community was freely able to provide input on the actions of those elected, there would be little possibility for a hidden agenda or claimed ignorance. Civilians are levelled to the same operation as those in power, with equal access to legislation.

A study conducted by two thesis students of the University of Gothenburg in Sweden explored the essentials of configuring an opensource network in a developing country. They managed to deduce an invaluable
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set of standards which a country should meet in order for an opensource network to function appropriately. Firstly, the technology needs “to address real, experienced problems in the country”, seconded by the need to ensure the users are educated in terms of their ability to use and understand the implications of such collaborative efforts. If these two criteria are not met, it is thought the system would be unsuccessful, with room for corruption and unequal opportunity with some more capable than others. I now return to my thesis that the opensource model would prove a viable option for indigenous cultures in very much the same ways it has demonstrated effectiveness in developing countries. Again we are fortunate to have a model to refer to in comparing opensource applications between a developing nation and an indigenous culture. The Zapatista National Liberation Army (EZLN) led a rebellion in Mexico on 1 January 1994 with the objectives of democracy, freedom, and justice. The democracy they envisaged was one of consensus and wide participation. They believed that in order for the indigenous values and beliefs to be fairly represented in the governance of their country, an opensource and participatory system would be needed (Graham). National and international support networks were established between the EZLN and any organisation that shared the initiatives of the movement. This allowed a well grounded collaboration between the EZLN and numerous supporting individuals and organisations, capable of progressing with shared goals and motivations. Accordingly, the revolutionaries remain an influence in conveying the needs of the indigenous people of rural Mexico. On a more broad scale then, a similar network such as opensource, could be established among the indigenous cultures of Canada, and in particular those of the north where large geographical boundaries and rural outposts make communication complicated and inefficient.

In demonstrating the appropriation of the opensource model into the needs of indigenous cultures of the north, it is important to return to the masters thesis of Hafstrom and Hofbauer and examine their eight fundamental considerations of applying such a model to a cultural situation. The primary consideration was the importance of the real and experienced problems the
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system is to address (Krakowski 319-330). In my current assessment of northern issues, I believe that first and foremost should be the equal representation of the cultural traditions of the Inuit in policy regarding political or economic stresses to their environment. With economic interest in the resources of the north, it will only become increasingly paramount that such needs are addressed and made aware to those writing policy regarding the use of indigenous lands. For this to be done efficiently and inclusively, a platform or forum of an opensource nature will be an asset. Second on the list and equally as important is the need for those whom the system is serving to be educated and made aware of the operations of the system and the importance of their active participation. If those involved are not able to engage, then the system will reflect the homogenous interests of those who do, with a unilateral approach leading to potential exploitation of indigenous interests. Thirdly, the system must be operating sustainably, without economic stresses involved in the maintenance of this technology. Similarly, the infrastructure must be installed and operational within the people’s economy. This is easily addressed with opensource software solutions where the platform itself is essentially free once the hardware becomes available and has been integrated. Number five on the list is the importance of “local champions”, such as an actively engaged elder or local political representative in order to establish social security among those whom the system is to reflect. The people must be confident in the capability of the system to address their concerns and best interests. Though opensource is a public forum, it too must be targeted at the right groups as to avoid impartial consideration of the needs of the population. For example, if the system is employed by federal government agencies and industrial leaders, but not by the indigenous collective, than the results will be homogenous. Lastly, the system must solve people’s problems, not result in more and furthermore, it must not avoid the structures and attitudes of an actively participating collective, but instead accommodate them in the basic functioning of the feedback mechanism. Should these considerations be taken into account, indeed the opensource model would effectively address the cultural traditions of the indigenous peoples of the north in an open and
participatory forum, providing free democratic communication between the parties involved in the local stresses.

Before concluding with summary remarks, it is important to understand the practicality of such profound initiatives. Certainly, it would not be immediately practical and may never be for the federal or provincial legislature to be a single opensource platform where all policies are open to debate at any given time by any member of society. This is essentially too large a population for the code to be written efficiently. The system would collapse due to inefficiencies where an agreement would never be reached. Accordingly, as is the case with opensource software development, reflective development teams are established where diversity is the objective, taking into account any concern which may arise on behalf of the population. Furthermore, development teams always concern themselves on a specific project, rather than on all projects and initiatives going on at any given time.

Allow me to provide an example. The ubuntu linux project is an opensource platform for the software development of an alternative operating system. Within this umbrella, however, are many smaller projects which target specific interests, collectively resulting in the ubuntu linux system. The development teams on each project differ depending on the specific objectives and users concerned with the aims of the project in question. Accordingly, individual projects are efficiently and democratically completed with a diversity of opinion represented, while still ensuring efficiency. Recently, a development team was established to meet the needs of the Wellcombe Trust Sangar Institute concerning its activities as an infectious disease research laboratory (“Ubuntu enables advanced computer research into killer diseases.”). To reflect on the eight guidelines previously mentioned, the project first addressed the importance of an educated user base, where participants understand how the system works and how it may be used to their benefit while ensuring a diverse collective. Workshops were put into action, providing tutorials on the system and how it may be used for collaborative research. If such a system was to be put into use, those involved with the research objectives of the initiative would require training. In addressing the issue of sustainability, the use of such an
efficient network allows all maintenance to be taken care of from any point in the network, such as the institution headquarters where all maintenance and support is completed. This frees the research personnel of administrative duties, allowing for concentration on their personal research. Finally, the network has integrated many remote sites throughout the developing world, ensuring research is novel and all those involved are up to date as to the progress being made. In this way individual advancements become the advancements of the collective.

We have now explored the application of opensource software models, both directly in terms of providing a medium in which political, economic, and cultural topics may be discussed, as well as an extension out of software development into the development of legislature and policy which reflects these growing political, economic and cultural concerns. The opensource model has been proven democratic and responsive to the evolving needs of those it serves, as well as a dynamic system with extensions beyond software development into any active debate where mediation is required in order to integrate a diverse population. We have also elaborated on the use of development teams as representative collections in a diversity of opinions. Such teams may work on practical projects, collectively accumulating into a larger opensource initiative which can be escalated to any degree, communicating any topic of discussion where necessary. The use of case studies as models is important in understanding the requirements of an opensource development as to ensure an element of diversity and debate is maintained, free of corruption and homogeneity. This will be of particular use to the reflection of indigenous values into the development of policy concerning the management of indigenous land resources as well as the accommodation of traditional customs into the changing political and economic landscape of today, as was observed in the long-term success of the Zapatista movement in Mexico. Opensource will play an active role in the spread of democracy and equal opportunity throughout the developed and developing worlds alike, where one day there will exist a globally unified but diversified opensource platform mediating the advancement of social welfare.
Sources Cited:


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