Open Science Assembly of Iran in Diaspora

Open Source Open Science Iran (osIran)

I. ABSTRACT

The objective of this study is to create open-source, scientifically rigorous plans through an open science assembly established by the Iranian diaspora for Iranians living in Iran. We investigate the feasibility and design of such a coalition, examining critical factors, including size, objectives, core principles, membership criteria, selection process, decision-making methods, and operational strategies. To address our research goals, we break down the problem into several research questions. This study employs an open-source, open-science approach that continuously updates to resolve issues and incorporates expert contributions. The project is accessible through the Github repository https://github.com/oalee/os-plan-coalition. Engaging experts and stakeholders in the region is crucial for ensuring the feasibility and effectiveness of the proposed solutions. Our research offers insights into the formation of a representative coalition and serves as a guide for future endeavors to establish a more equitable and democratic society in Iran through the development and implementation of open-source, scientifically informed plans.

II. PROBLEM STATEMENT

In this study, we will focus on the two main sub-problems identified in the Problem Statement section, namely the uncertainty about the future and the lack of knowledge and education among the people of Iran. The aim of this study is to provide insights into these challenges and propose potential solutions that could empower Iranians to create a more democratic society and secure a better future. Through an in-depth analysis of these issues, we hope to contribute to the Women.Life.Freedom movement's efforts and assist in overcoming these obstacles in their quest for a brighter future for Iran.

A. Uncertainty About The Future

The uncertainty about the future is a significant challenge faced by the Women.Life.Freedom movement in Iran. People's fear of what will happen can make it challenging to mobilize and motivate them to continue their struggle. The prospect of another totalitarian regime in Iran, similar to what happened in other failed revolutions, adds to this fear.

To overcome this challenge, a well-researched and scientifically sound plan for the future can help mitigate the uncertainties faced by the Iranian people. Such a plan should be grounded in empirical evidence and scientific research, addressing the challenges facing the country and offering practical solutions for a more democratic and equitable society. By offering a clear and actionable roadmap for the future, the movement can inspire Iranians to work together towards a shared vision and overcome their fears of uncertainty.

B. Lack of Knowledge and Education

Access to knowledge and education is crucial for the Women.Life.Freedom movement in Iran to establish a democratic society and create a better future. However, the current regime controls education in Iran, limiting access to information and knowledge, spreading their propaganda and affecting the mind of young, and hindering the ability of Iranians to defend themselves against oppressive forces.

To address this challenge, the Women.Life.Freedom movement could prioritize the development of an alternative open science online platform for education of all Iranians, starting with schoolgirls who are often most in need of access to education. The movement could also advocate for policies that prioritize secular online education alternative and provide resources to people of Iran to ensure a well-rounded education. By empowering Iranians with the knowledge and skills to defend themselves and advocating for a more democratic society, the Women.Life.Freedom movement can pave the way for a brighter future.

III. INTRODUCTION

The rapid advancement of technology, particularly in digital communication, has substantially impacted political and social interactions in recent years. This research investigates the feasibility of establishing a representative system and an open science assembly among the Iranian diaspora, focusing on the development of scientifically robust plans for environmental restoration, education, and other critical areas. The study's novelty lies in its comprehensive approach, combining theoretical insights, empirical evidence, and data-driven methodologies to evaluate the potential of such a system for addressing the challenges faced by Iran.

Digital democracy offers a unique opportunity to revolutionize decision-making processes by enabling citizens to participate directly in shaping public policies and addressing pressing societal issues, such as environmental conservation and education reform [1]. By harnessing digital platforms and tools, citizens can engage in informed deliberation, collaborate on policy proposals, and hold public officials accountable.

This research aims to assess the feasibility of creating a representative system among the Iranian diaspora, emphasizing scientific research and the development of strategic plans. The primary goal is to determine how such a system could foster collaboration and effectively address Iran's challenges through data-driven methodologies and the analysis of public opinion.

This work is structured as follows: First, we provide an overview of the key concepts, including digital democracy, environmental restoration, and education reform. Next, we examine the current state of these areas in Iran, identifying

challenges and opportunities. We then explore the feasibility of establishing a representative system and an open science assembly among the Iranian diaspora, aimed at promoting scientific research and collaboration. Subsequently, we evaluate the potential of integrating digital democracy methodologies into the proposed plans and the development of a roadmap for Iran's future. Finally, we outline the necessary steps to harness digital democracy for sustainable development and progress.

By assessing the feasibility of a representative system and an open science assembly, this research aims to enhance understanding of how technology and data-driven methodologies can empower citizens and promote more inclusive, transparent, and effective governance in Iran. The findings may also serve as valuable insights for policymakers, practitioners, and researchers in other countries seeking to leverage digital democracy for environmental restoration, education reform, and other vital areas of societal development.

IV. BACKGROUND INFORMATION

A. Open Source

Open source is a development methodology that emphasizes collaboration, transparency, and community involvement [2]. This approach involves sharing software code, enabling individuals to view, modify, and distribute it, in contrast to proprietary or closed-source software, where the code remains inaccessible for such purposes [2]. Open source has been a driving force behind numerous technological advancements, including the development of the internet, which is largely built on open-source software such as Linux [2].

B. Open Science

Open science is the movement to make scientific research and its dissemination accessible to all levels of society, whether amateur or professional. It promotes transparency and accessibility of knowledge, fostering its development and sharing through collaborative networks. Open science encompasses various aspects, including open access to publications, open data, open-source software, and open educational resources [3].

C. Open Science Schools of Thought

There are five main schools of thought within open science, each emphasizing different aspects and motivations:

1) Democracy: This perspective asserts that scientific knowledge should be accessible to everyone, regardless of their social, economic, or professional background, as a matter of democratic principle [4].
2) Infrastructure: This view emphasizes the importance of providing open-source infrastructure and tools to facilitate collaboration and knowledge sharing among researchers and the wider public [4].
3) Pragmatic: The pragmatic school of thought focuses on the practical benefits of open science, such as increased efficiency, reproducibility, and accelerated scientific progress [4].

4) Public: This perspective is concerned with the accessibility of knowledge creation, aiming to increase public engagement with science and promote science literacy across society [4].
5) Measurement: This school of thought is focused on alternative impact measurement, considering new metrics to evaluate the success and impact of scientific research beyond traditional citation-based indicators [4].

D. Open Science and Education

Open science also extends to education, promoting open access to educational materials, resources, and courses, enabling more people to engage with scientific knowledge and research [5]. This approach encourages lifelong learning, scientific literacy, and public engagement with science, empowering individuals and communities to make informed decisions and contribute to the scientific process [4].

E. Transparency

Transparency is a critical aspect of democratic societies, as it ensures equitable access to information and prevents power monopolization through secrecy [6]. Modern technology advancements have enabled increased transparency in governmental affairs, leading to improved trust, accountability, and efficiency in public administration [7].

Governments can leverage contemporary technologies, such as live streaming and automatic transcription using AI, to enhance information access, citizen engagement, and decision-making accountability [8]. As technology evolves, it provides new opportunities for implementing transparency measures that further promote open governance and foster democratic values.

F. Deliberative Democracy

Deliberative democracy posits that political decisions should be reached through fair and reasoned discussions and debates among citizens [9]. This democratic model emphasizes citizens' exchange of arguments and the consideration of various claims aimed at securing the public good [10].

Deliberative democracy is often considered superior to representative democracy because it directly involves citizens in the deliberation process, rather than relying on elected representatives [11]. Ideological biases can hinder individuals from understanding others' perspectives and emotions. However, engaging in deep, meaningful conversations can reveal shared interests and values that may have been previously overlooked [12].

Historically, deliberative democracy was practiced in ancient Greek city-states, where citizens gathered in large assemblies to deliberate and reach consensus on laws and policies [13]. The scalability of this form of democracy proved challenging as populations grew, leading to the development of representative democracy as an alternative solution [14]. Nonetheless, the modern leaderless movement "Women Life Freedom" embodies the spirit of deliberative democracy, emphasizing the importance of inclusive and participatory decision-making processes

G. Open Governace

The open government was proposed by an international organization called the OGP (Open Government Partnership). Open governance is adhering to open value and engaging with citizens to improve services, manage public resources, drive innovation and build safer communities. With the principle of transparency and open government, we will achieve prosperity, well-being and a society in line with human dignity in our own country and in an increasingly connected world. The four elements of an open government are:

1) Transparency: Politics is everyone's business, and the policy process should allow the public to have a clear understanding of "what's going on." Friends in the public sector may be worried whether there will be any problems if we let the outside world see the communications before it's finished. In fact, the earlier the information is provided, the easier it is for the public to understand what the public sector is preparing for, so that the public sector can save the effort and time of repeated communication and further reduce the communication burden.

2) Participation: In the process of policy formation, the public is given the opportunity to participate in discussions, express opinions, and even further influence the content of policy on topics of interest. As a result, while the public sector needs to spend more time building consensus, when the policy takes shape, it is less likely to be opposed by the public or totally objected.

3) Accountability: When the public has doubts about the process of policy formation, we can look back to see who does and what are the reasons

4) Inclusion: Public issues are broadly oriented. In the course of discussion of an issue, if the public sector is able to allow the various stakeholders who are directly affected by policy to fully voice their views and able to listen to their dialogues, it can collect as many views as possible so as to reduce the likelihood of policy errors.

H. Civic Technology of Democracy

Democracy is a social civic technology. The Taiwanese have shown us that we can use modern technology to make deliberative and participatory democracy possible for the masses, and open governmental affairs to the public with the internet. A tool that they are using is called pol.is. Pol.is is a social media platform equivalent to a town hall. In contrast, other social media platforms could be viewed as nightclubs and bars where people shout, fight, scream and the extreme ends of society are highlighted. Pol.is is a platform where people can participate in deliberation and rational discussions, synthesize solutions and reach consensus. With social innovation and deliberative digital democracy platforms, even with controversial and polarized subjects people can reach consensus.

I. vTaiwan

Digital democracy in Taiwan was started in 2014. This initiative is called vTaiwan and the "v" stands for "vision", "voice", "vote" and "virtual". The participatory and deliberative democracy process in Taiwan has four stages and it is based on the focus conversation method. In the first stage, issues are identified, and then people's facts, objectives, and experiences about the issues are collected. In the second stage, people's feelings about objectives and statements are collected. In the third stage, after people converge on sets of feelings that resonate with everyone, ideas on how to address them are collected. In the fourth state, the idea that is consensus is translated into legalese and signed into law. At each stage transition to the next one is done when a rough consensus is formed.

J. Safe Technology in Modern World

Technology is evolving at an exponential pace, and we must consider how to integrate it with our lives and not let it dictate our lives. In Taiwan, to integrate technology into their lives, they have a system of trial and error. The consequences of new ideas and innovations such as robots are yet to be discovered. Taiwan opens up regulations for innovations in a sandbox system called Smart City. They try a new regulation and test it for a year and learn how to integrate with the law of the country and their lives. This not only helps our species to understand technology, and how we should integrate it into our lives but also opens up a venue for innovation, technological advancement, and a safe path toward the future for our species.

V. METHODOLOGY

The methodology employed in this research is a collaborative, data-driven approach that embraces open-source and open-science principles.

A. Open Source Open Science Methodology

This study adopts an open source open science methodology that combines both principles to promote transparency, reproducibility, and collaboration in research. The methodology emphasizes sharing of privacy aware data, tools, and results through open-source platforms such as Git, thereby enhancing collaboration, transparency and reproduciliy of this work. To ensure the rigor and validity of the research, the open source open science methodology also involves open peer review and open collaboration and platforms for analyzing public opinion such as open question answers. Experts in the field will be invited to review and provide feedback on the work, while collaboration with other researchers and stakeholders will be encouraged. This will enable a more comprehensive and diverse evaluation of the research, and contribute to enhancing its validity and generalizability.

B. Dissmination of Knowledge

The dissemination of research findings is also a critical aspect of the open source open science methodology. This will include publishing articles in open access journals, making presentations at conferences, and sharing results and data through social media and other online platforms. The aim is to make the research findings widely accessible and understandable, even to those without a technical background. To achieve this, the methodology includes the dissemination of knowledge

at various levels of complexity, ranging from academic publications to online articles and videos with a more accessible language. This dissemination potencially can enable a wider audience regarless of their educational background, including children, to understand the significance and implications of the research.

C. Research Plan

This research plan is grounded in empirical data. The first step involves gathering data on research questions to determine their relevance to people in Iran. Public opinion will be analyzed, and the plan refined accordingly. The next step is to release open resumes of the applications of this assembly and analyze the data to further refine the plan. By using a collaborative, data-driven approach, this research aims to produce results that are relevant, transparent, and replicable.

VI. RESEARCH QUESTIONS FOR THE OPEN SCIENCE COALITION AND REPRESENTATIVE ASSEMBLY

To effectively address the challenge of creating a representative coalition and assembly, we have identified the following key research questions to guide our investigation and analysis:

A. How many members should the coalition and assembly have?

The coalition and assembly aim to represent the diverse population of Iran, including various ethnicities such as Kurds, Balouch, Azari, and others. A small number of members, such as seven, would not adequately represent the people of Iran. To ensure comprehensive representation and inclusivity, the coalition and assembly could consist of hundreds of members. This larger size would enable a broader range of perspectives and a more accurate representation of Iran's diverse population, fostering equitable decision-making and policy development.

B. What are the objectives of the assembly?

The assembly should represent the people of Iran to the world and plan for the country's future. Open science case studies can be conducted in all aspects of governance to create solid plans for Iran's future once the Islamic Republic is overthrown. A well-prepared plan for the future would clarify uncertainties and support the people of Iran in their efforts to bring about governmental change and a better path toward the future.

C. What are the core principles of the assembly?

In this section, we propose three principles:

1) Openness and Transparency: Openness and transparency are crucial for ensuring the assembly's credibility and trustworthiness. All assembly operations should be digitally transparent. Members communicate via the internet, making data publicly available, and all communication, whether in-person or online, is live-streamed. The assembly's finances are digitally transparent, and all software is open-source.

2) Deliberative Democracy: Deliberative democracy emphasizes the importance of discussion and debate among members, allowing for a leaderless structure where the assembly operates as a heterarchy. This approach fosters collective decision-making and promotes a more inclusive, democratic environment.

3) Development of Open Scientific Plans for Iran's Future: The assembly will focus on creating open-source, open-science, peer-reviewed plans that result from rigorous research. Open-source science entails presenting the progress of the work and all its digital artifacts to the public, enabling collaboration with anyone worldwide, including individuals inside Iran. This approach allows people in Iran to submit their plans, raise questions and concerns about existing plans, and receive answers from researchers.

D. Who are the members of the assembly?

The assembly should comprise representatives from all ethnicities and minorities in Iran, as well as the best candidates for developing the plans. Consequently, the primary members of the assembly may include activists, scientists, engineers, and artists. Expert groups can be established by these members to research various governmental aspects, such as banking and financial infrastructure, utilities infrastructure (water, electricity, gas), communications infrastructure (television, internet, radio), policing, national military, public health, rule of law, environmental sustainability, transitional government, transitional justice, democratic elections, education, and economy and commerce. Each field should have a dedicated team of at least 5 to 10 experts and researchers to propose and develop plans.

E. What is the selection process for the members of the assembly?

The selection process must be transparent from the outset. Candidates who accept the assembly's core principles can apply for council membership by submitting a resume, proposal, livestream interviews with Iranians, and participating in open QA sessions. All application data is made publicly available. Organizations can only have representatives considered if they adhere to the assembly's transparency and openness protocols.

The candidate selection process and interviews are live-streamed, with members chosen based on their representativeness and meritocracy in conducting global case studies. Multiple NGOs can further analyze the data and submit online reports. Additionally, the Iranian diaspora can be officially asked to vote, using a secure protocol to forward the votes of relatives and friends inside Iran. Social media analysis can provide further insights into the opinions of people in Iran.

The data can be analyzed through an open science methodology, which embraces digital democracy principles. By employing statistical analysis of all the collected data and developing a valid hypothesis with a high confidence interval, the members can attain legitimacy in their representativeness. This open science approach fosters greater transparency, collaboration, and inclusiveness in the selection process.

F. What is the selection process for plans?

Any open science peer-reviewed research proposal can be submitted by individuals for consideration in shaping the future of Iran. In cases where multiple plans are proposed for a specific subject, a deliberative process is used to identify the most suitable plan for Iran, with discussions continuing until a rough consensus is reached.

G. How can people inside Iran participate in the assembly?

Digital tools can be employed to enable secure remote participation. Additionally, the analysis of social media data can help determine the preferences and opinions of the Iranian people. Independent third-party organizations can conduct scientific analyses to ensure transparency and openness in the process.

H. What do the Iranian people want?

To answer this question, it is essential to examine the past and investigate the demands of the Iranian people. By establishing a secure internet channel and a social democracy platform, data can be collected and analyzed to better understand the desires and aspirations of the Iranian population.

I. What is the decision-making process?

J. What are the operational strategies?

K. Can we make an assembly of thousand with participatory deliberate digital democracy platforms?

VII. FUTURE WORK

Future work includes answering the open research questions, and writing a scientific peer-reviewd blueprint.

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