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# Psychological Power Parity: A Novel Perspective on Perceived Economic Power

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## Abstract

This paper introduces the concept of "Psychological Power Parity" (PsPP), a novel approach to understanding an individual's perceived economic power within their local and global ecosystems. The proposed theory explores how an individual's perception of their economic resources, relative to their social connections, impacts various aspects of decision-making, life outlook, and societal dynamics. The concept is grounded in the principles of power basis theory, self-perception, and attribution to understand the nature of power. The paper presents a quantitative framework for measuring PsPP, accounting for factors such as the degree of interaction with connections, the permeability of boundaries between local and global ecosystems, and the distribution of economic resources within these ecosystems.

## Introduction

The concept of power has captivated scholars and thinkers throughout human history, with its multifaceted nature and far-reaching implications for individual and societal dynamics. From Aristotle's conceptualization of power as the ability to achieve desired outcomes <sup>[1]</sup> to Machiavelli's pragmatic view of power as a means to an end <sup>[2]</sup>, the pursuit of understanding power has been a central concern across various disciplines.

In the modern era, power basis theory <sup>[3]</sup> has provided a framework for understanding the distinct sources of social influence, including legitimate, coercive, reward, expert, and referent power. While economic resources have historically been recognized as a significant source of power, the psychological dimensions of perceived economic influence have received relatively less attention.

This paper introduces the concept of "Psychological Power Parity" (PsPP), which explores how an individual's perception of their economic resources, relative to their social connections, shapes various aspects of decision-making, life outlook, and societal dynamics. The proposed theory delves into the interplay between an individual's perceived economic standing and their psychological well-being, aspirations, and interactions within their local and global ecosystems.

## Theoretical Framework

The concept of PsPP draws upon principles from social psychology, particularly self-perception theory<sup>[4]</sup> and attribution theory<sup>[5]</sup>. These theoretical foundations provide valuable insights into how individuals develop attitudes and beliefs about themselves and interpret the causes of their own and others' behavior.

Self-perception theory posits that individuals develop attitudes and beliefs about themselves based on their own behavior and the circumstances surrounding it. In the context of PsPP, an individual's perception of their economic resources is shaped not only by their absolute wealth but also by their comparative standing within their social networks. This perception, in turn, influences various psychological and behavioral outcomes, such as happiness, aspirations, social hierarchies, power dynamics, and attitudes towards others.

Attribution theory, on the other hand, examines how individuals explain the causes of their own and others' behavior. Within the framework of PsPP, individuals may attribute their perceived economic standing to various factors, including personal effort, circumstantial factors, or external influences. These attributions can shape their self-perception, motivation, and interactions with others within their local and global ecosystems.

Moreover, the concept of PsPP draws inspiration from the works of Aristotle<sup>[1]</sup> and Machiavelli<sup>[2]</sup>, who provided seminal insights into the nature of power and its manifestations. Aristotle's notion of power as the ability to achieve desired outcomes resonates with the idea that an individual's perceived economic standing can influence their ability to attain various goals and aspirations. Machiavelli's pragmatic view of power as a means to an end further underscores the potential impact of perceived economic influence on individual decision-making and societal dynamics.

## Quantifying Psychological Power Parity

To quantify the *comparative economic power*, the resources owned or at the disposal of an individual need to be compared with sum total of economic resources of the connections in their network.

Let's take an example of a 5-year-old boy named Jack. His network of connection encompasses his immediate family, his classmates, his teachers, and some other people. Let's assume it adds up to 50 people. For him to feel accomplished in the monetary sense, he needs to be rich *in comparison* to those 50 people. However, he might also have an idea of Bill Gates' wealth – then he's pushed down the ladder by one rung.

Compare this with a grown-up Jack, who is now 30 years old. His network has increased vastly in the past 25 years. He's surrounded by a lot of people, both richer and poorer than him. However, one thing is for sure - his idea of monetary accomplishment has changed. Buying all the ice-cream he wants to eat is not an impossible idea anymore, in fact, there are people he knows who literally *own* an ice cream company. However, he also knows people who didn't manage to do so well in life – and consequently, the general idea of wealth distribution in his network.

Does Jack feel more, or less accomplished about his monetary status now? Well, the answer lies in comparison. Did Jack move up the ladder in comparison to his connections? For that, we need to calculate his wealth in comparison to the average wealth of his connections.

To formalize the comparison of Jack's wealth relative to his network, a fundamental formula emerges:

$$X_j / ((X_1 + X_2 + X_3 + \dots + X_n) / n)$$

Here,  $X_j$  denotes Jack's total resources, while  $X_1, X_2, X_3, \dots, X_n$  represent the total resources of each connection within his network, and  $n$  signifies the total number of connections. This equation encapsulates the comparative wealth, with the denominator representing the average wealth within Jack's network, excluding his own resources.

The lower limit of this comparative wealth tends to 0, while the upper limit tends to be infinity.

### Does degree of interaction matter?

Consider the 5-year-old Jack. When he learned about Bill Gates, how much did it affect his idea of wealth and accomplishment? The answer lies in his degree of interaction with Bill. It's not like once he knew about the immense wealth that he couldn't even comprehend, his self-perception of monetary accomplishment dropped drastically. Why? Because he didn't know him *personally*. His interaction was very limited and shallow with this person – who only existed as a distant figure, perhaps an idea. The degree of interaction with a connection decides how much it would affect our perception of wealth and accomplishment.

To quantify, if the resources owned by a connection 1 is equal to  $X_1$ , the effect or the weight it would have in our network would be:

$$X_1 * I_1$$

Where  $I_1$  denotes the degree of interaction with *connection 1*. Extending this concept to the entire network, the equation for average wealth within Jack's network adapts accordingly:

$$(X_1 * I_1 + X_2 * I_2 + X_3 * I_3 + \dots + X_n * I_n) / n$$

$$= (\sum X_n * I_n) / n$$

Here,  $I_1, I_2, I_3, \dots, I_n$  represent the degrees of interaction with each connection. Consequently, the comparative wealth formula becomes:

$$X_j / ((X_1 * I_1 + X_2 * I_2 + X_3 * I_3 + \dots + X_n * I_n) / n)$$

$$= X_j / ((\sum X_n * I_n) / n)$$

Degree of interaction is a concept which needs to be quantified. How can we tell what was young Jack's degree of interaction with Bill Gates?

However, we know some things –

- the least it can be is 0 (no interaction)
- the maximum it can be is 1 (since wealth can't exceed its original value even with highest degree of interaction i.e.,  $X_1.I_1$  cannot be greater than  $X_1$ )

## Local and Global Ecosystems

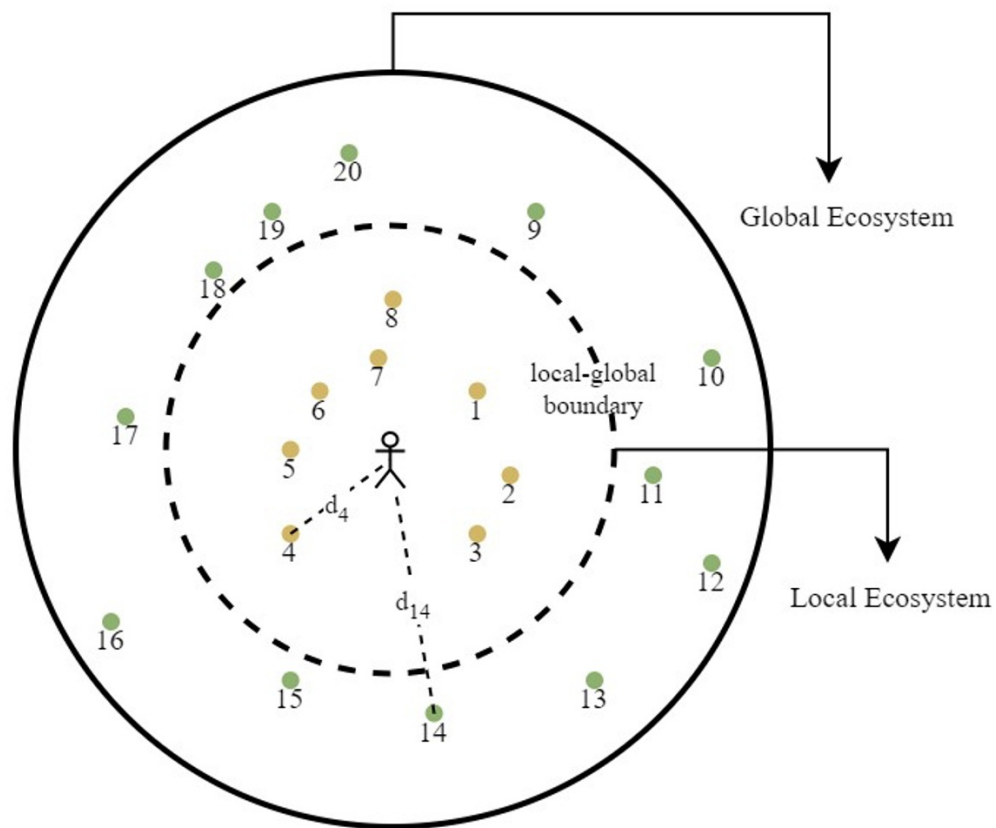
Clubbing together connections based on geographical boundary creates a local network or a local ecosystem of connections. Usually, constituents of the local ecosystem have a high *average* degree of interaction with the individual, as degree of interaction is dependent on physical distance.

Clubbing together all connections, without the constraint of any geographical boundary creates a global ecosystem of connections. Constituents of the global ecosystem will have a lower *average* degree of interaction with the individual in general circumstances (except cases where the individual has minimal interaction with the local network and their interaction with connections is geography independent).

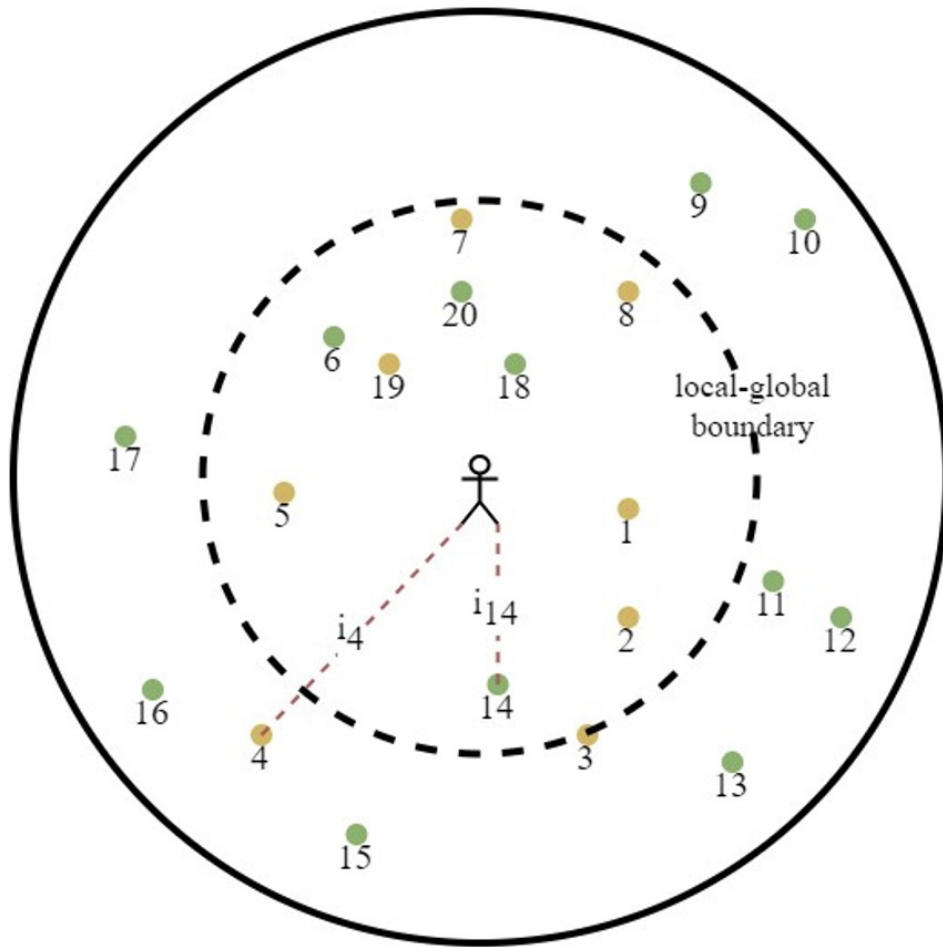
Local ecosystem and its constituents are a subset of global ecosystem. Hence, every local connection is a global connection. However, for the sake of simplicity – we will only refer to non-local connections as global connections in subsequent discussion.

The differentiation between local and global ecosystems is based on geographical distance, rather than degree of interaction. In Fig. 1, connections 1 to 8 (in yellow) are part of the local ecosystem, inside the *local-global boundary* (denoted by dashed circle), while connections 9 to 20 (in green) are global connections, and part of the global ecosystem.  $d_4$  and  $d_{14}$  denotes the physical distance of the individual with connection 1 and 14, respectively.

The degree of interaction of *each* constituent of local ecosystem is not always higher than non-local constituents, as illustrated by Fig. 2, where the individual is interactively closer to connection 14 ( $i_{14}$ ), as compared to connection 4 ( $i_4$ ), even though  $d_4 < d_{14}$  i.e., connection 4 is physically closer to the individual.



**Fig. 1.** Physical distance of connections in local and global ecosystems



**Fig. 2.** Degree of interaction with local and global connections

### 1. Local ecosystem

A local ecosystem may be a city, district, town, village, or any society – where individuals are connected within a physically existent boundary. The breadth and depth of a local ecosystem may vary for individual based on the expanse of their connections within that physical geography. A city mayor will have a larger local ecosystem (i.e., have more connections in their network) than a clerk in their office, due to the range of connectedness they have within the same physical boundary. Let us call the PsPP within local ecosystem as **PsPP(L)**.

To quantify the comparative power due to economic resources within local ecosystem, we need to define:

1. The resources owned by, or at the disposal of the individual  $X_i$
2. The comparative wealth owned by constituents of local ecosystem  $= (\sum X_n \cdot \ln) / n = X_L$

The elementary equation for PsPP(L) is defined as:

$$X_i / X_L$$

Note that local ecosystem is unique to each person, as discussed above. Consequently, the value of  $X_L$  would not be

constant, and is dependent on the sphere of each individual.

## 2. Global ecosystem

A global ecosystem is the maximum expanse of connection the individual has with the global economy. For example, the global ecosystem for an individual working in Wall Street, New York maybe different from another individual working as a waiter in Brooklyn, New York; on account of their financial, professional, and social spheres. Let us call the PsPP within global ecosystem as **PsPP(G)**.

To quantify the comparative power due to economic resources within global ecosystem, we need to define:

1. The resources owned by, or at the disposal of the individual  $X_i$
2. The average resources owned by constituents of global ecosystem  $(\sum X_n \cdot I_n)/n = X_g$

The elementary equation for PsPP(G) is defined as:

$$X_i / X_g$$

Note that global ecosystem is unique to each person, as discussed above. Consequently, the value of  $X_g$  would not be constant, and is dependent on the sphere of each individual.

**Boundary between local and global ecosystem:** As discussed above, the local-global boundary is defined by physical radius or geography within which we are studying the individual. It could be a town, city, state, or even a country.

We will now explain how the local-global boundary affects the local psychological power parity **PsPP(L)**, with an example:

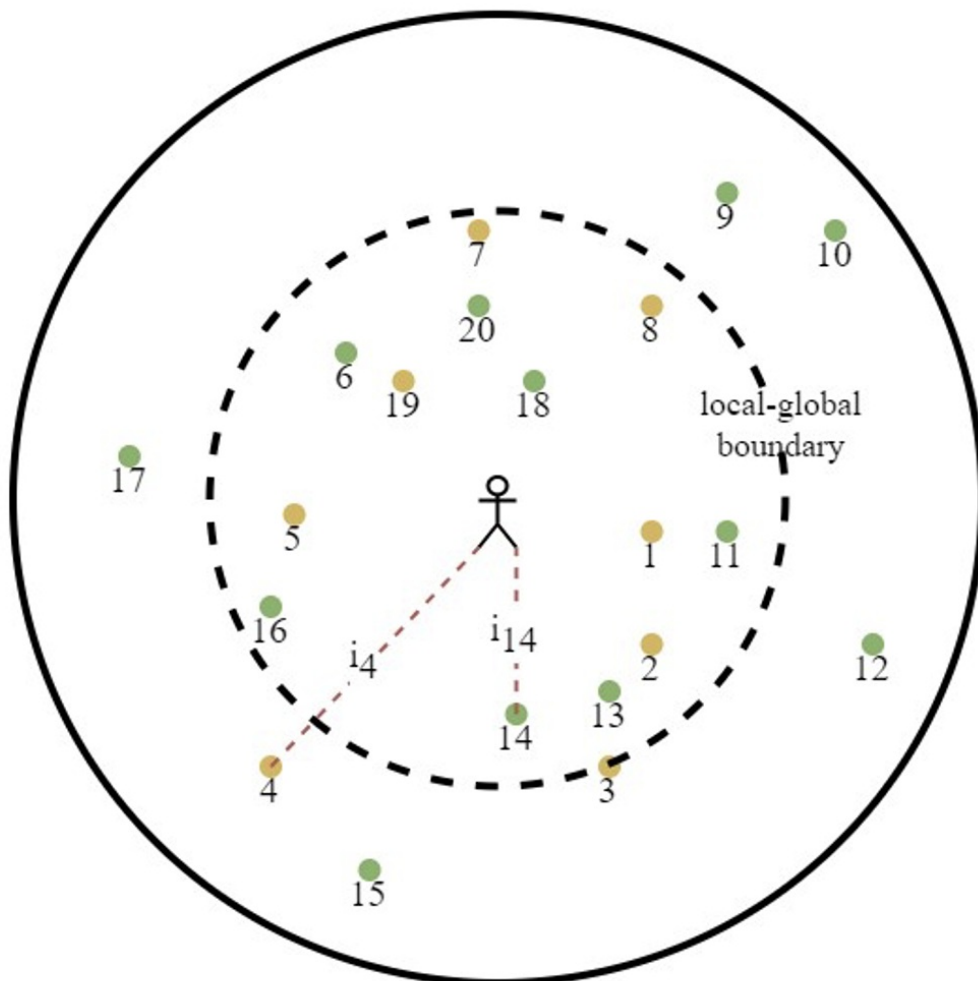
Consider a village landlord (A) – who holds significant economic resources as compared to the ordinary citizens. His ecosystem is limited – he has all his assets and revenue sources within the village. His social and professional connections, with whom he interacts, are limited to the geography of the village and surrounding areas, with a few exceptions. We can say that his sphere, or global network of connections, has a low interactive overlap with connections from his local geography.

Contrast this with another village citizen (B) – a businessman residing in the village who owns a factory in the city. In terms of economic resources, A and B have an almost equal footing. The businessman deals with bureaucrats and local politicians very often. In addition to the city, his sphere extends to multiple geographies – where the supplier, the distributor, and the consumers are located. He interacts almost equally with local and global connections in his network.

Who will have a greater PsPP(L)? The answer is A, as his *high-interaction* connections are limited to a set of citizens where the *central tendencies of wealth distribution are lower* than B. In other words, since B's local and global ecosystems are more overlapping in interactions, the boundary between local and global ecosystems diminishes (becomes more permeable) and he cannot help but allow the degree of his interaction with his global set of connections, which have higher central tendencies of wealth distribution - lower his PsPP(L).

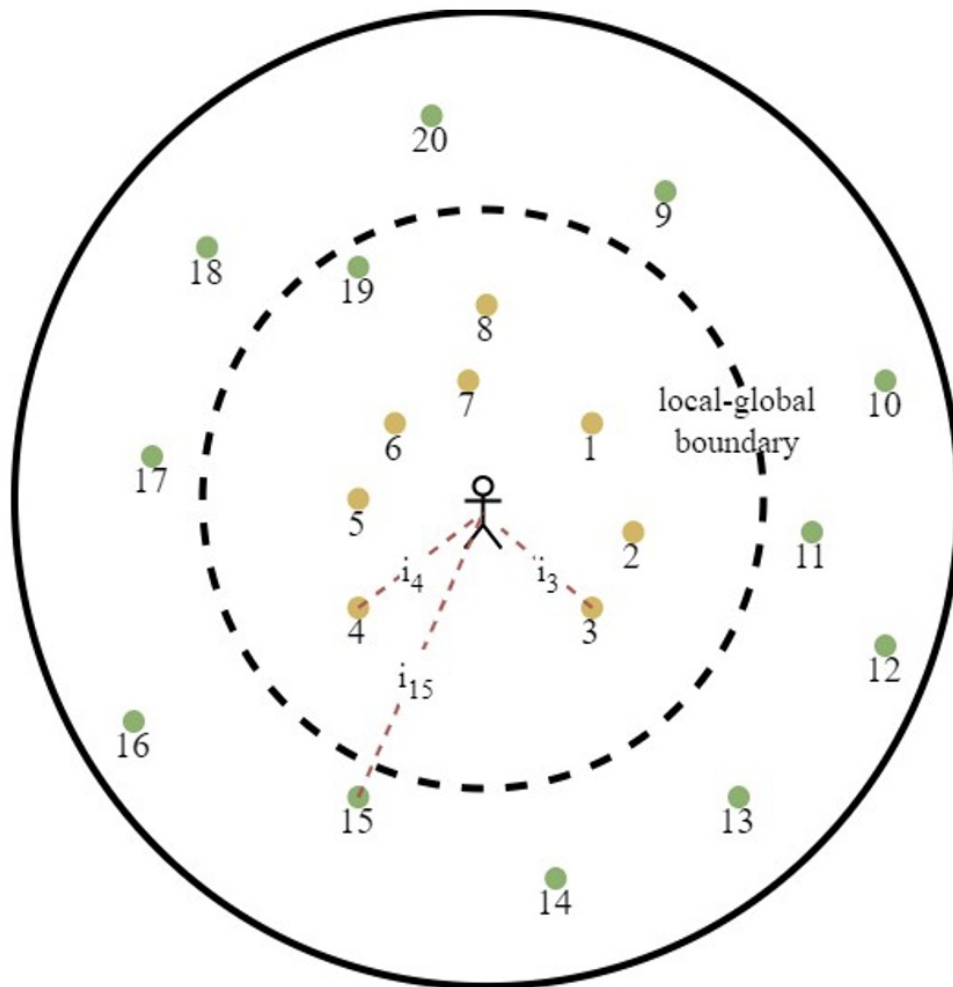
Few more illustrative examples:

An individual living in a ghetto who works in the financial district among affluent citizens. The boundary would be distinct and less permeable as there is little overlap in the constituents of both ecosystems.



**Fig. 3.** Degree of interaction in a highly permeable local-global boundary





**Fig. 4.** Degree of interaction in a minimally permeable local-global boundary

A businessman whose majority of investments and revenue sources are focused on a specific region, their boundary would be more substantial compared to a businessman whose investments and revenue sources are scattered across the global ecosystem.

#### Permeability of boundary between local and global ecosystems

As we saw in examples of A and B, the permeability of this boundary varies according to the nature of individual's relation with both ecosystems and overlap between the constituents of these two ecosystems.

Consider the example in Fig. 3, where the degree of interaction is high across local and global connections, hence the local-global boundary diminishes in significance (high permeability). In Fig. 4, the degree of interaction with global connections is low, hence the local-global boundary is significant (low permeability).

Since this phenomenon influences PsPP(L) we must quantify this metric as well. Let us define the local-global boundary permeability factor as  $\gamma$ :

We know that PsPP(L) is affected by the overlap of the local and global ecosystems, which is governed by the permeability factor. We also know that PsPP(L) can increase or decreased when affected by overlap (based on the average of global ecosystem). Also,  $X_i$  would remain constant, as it signifies the total economic resources owned by individual at that point in time.

The phenomenon that occurs which changes the PsPP(L) is the *interaction between elements of local and global ecosystem with respect to the individual*. The extent of interaction is dependent on the permeability factor.

The average economic resource within the local ecosystem is influenced by average global economic resource as much as the permeability factor ( $\gamma$ ) allows it, so it becomes:

$$x_L + \gamma * (x_g - x_L)$$

In our preliminary equation, we defined the PsPP(L) as:

$$x_i / x_L$$

The modified equation for PsPP(L) now becomes:

$$x_i / (x_L + \gamma * (x_g - x_L))$$

According to this equation, in special circumstances, where local and global ecosystems overlap perfectly ( $\gamma = 1$ ), the PsPP(L) would be equal to PsPP(G). In cases where there is no overlap ( $\gamma = 0$ ), the PsPP(L) would be as defined in the elementary equation ( $x_i / x_L$ )

In other words, PsPP(L) is affected by PsPP(G) through ( $\gamma$ ), or the permeability factor – which signifies the overlap and relation between local and global ecosystems of an individual.

**It is important to note that degree of interaction,  $I$ , and permeability factor,  $\gamma$ , are time-dependent entities and change over time as an individual's nature of connections evolve.**

## Implications and Future Research

The concept of PsPP has far-reaching implications for understanding individual decision-making, societal dynamics, and global processes across various domains:

### *Individual Decision-Making and Life Outlook:*

An individual's PsPP can significantly influence their personal aspirations, life satisfaction, and overall outlook towards life [6]. Those with a higher perceived economic standing within their local and global ecosystems may exhibit greater confidence, ambition, and a sense of accomplishment. Conversely, individuals with lower PsPP may experience feelings of inadequacy, leading to lowered self-esteem and diminished aspirations [7].

These psychological effects can manifest in various aspects of an individual's life, such as career choices, financial planning, and personal relationships. For instance, individuals with higher PsPP may be more inclined to pursue ambitious career paths or take calculated risks, while those with lower PsPP may adopt a more risk-averse approach [8].

### *Societal Dynamics and Power Structures*

The distribution of PsPP within a society can shape its social hierarchies, power dynamics, and dominant family structures [9]. Individuals or groups with higher PsPP may wield greater influence and authority, contributing to the formation of hierarchical structures and power imbalances [10].

Moreover, PsPP can influence an individual's attitude towards others within their ecosystems, potentially leading to discrimination, segregation, or a sense of superiority or inferiority. These dynamics can manifest in various forms, such as class divisions, exclusion from social circles, or preferential treatment based on perceived economic standing [11].

### *Migration and Mobility*

The concept of PsPP can shed light on migration patterns, both within and across national borders [12]. Individuals with lower PsPP within their local ecosystem may be more inclined to seek opportunities in regions or countries where their perceived economic standing could improve. This phenomenon can contribute to internal migration flows, as well as international migration trends.

Conversely, individuals with higher PsPP within their local ecosystem may be less inclined to migrate, as their perceived economic standing and associated psychological benefits are already well-established [13].

### *Political Inclinations and Civic Engagement*

An individual's PsPP can influence their political inclinations, attitudes towards social welfare policies, and engagement in civic activities [14]. Those with higher PsPP may exhibit different tendencies in terms of political preferences, engagement in social work, charity, and volunteering activities, compared to those with lower PsPP [15].

For instance, individuals with higher PsPP may favor policies that preserve their economic advantage, while those with lower PsPP may be more supportive of redistributive policies aimed at reducing economic disparities [16].

### *Global Dynamics and International Relations*

At a broader level, the concept of PsPP can contribute to our understanding of international relations and global dynamics. A nation's perceived economic power relative to others can shape its outlook towards the general populace of other countries, influencing trade policies, diplomatic relations, and economic cooperation [17].

Nations with higher perceived economic standing may adopt more assertive or protectionist stances in international negotiations, while those with lower perceived standing may seek to align themselves with more powerful economic blocs

or partnerships [18].

## Conclusion

The concept of Psychological Power Parity introduces a novel perspective on the interplay between economic resources and perceived influence, bridging the gap between objective economic measures and subjective psychological experiences. By integrating principles from power basis theory [3], self-perception [4], attribution [5], and the works of Aristotle [1] and Machiavelli [2], this paper offers a quantitative framework for understanding how individuals' perceptions of their economic standing shape various psychological and behavioral outcomes.

Through the proposed mathematical equations, the paper quantifies PsPP within local and global ecosystems, taking into account factors such as the degree of interaction with connections, the permeability of boundaries between these ecosystems, and the distribution of economic resources. The concept of PsPP opens up new avenues for exploring the psychological dimensions of perceived economic influence and its impact on individual well-being, societal dynamics, and global processes.

By advancing our understanding of PsPP, this research has the potential to inform decision-making processes at individual and collective levels, as well as contribute to the development of policies and interventions aimed at addressing perceived economic disparities and their associated consequences [19].

As an interdisciplinary concept, Psychological Power Parity invites further exploration, empirical validation, and collaborative efforts from scholars across various fields. Continued research in this domain can shed light on the intricate interplay between economic resources, psychological experiences, and human behavior, ultimately contributing to a more comprehensive understanding of the multifaceted nature of power and its far-reaching implications for individuals and societies alike.

## Measurement and Quantification Challenges

While the proposed mathematical framework provides a quantitative basis for assessing PsPP, several challenges and considerations arise in the practical measurement and quantification of the various components:

1. **Defining and Measuring Economic Resources:** The concept of economic resources encompasses a wide range of tangible and intangible assets, including income, wealth, property, investments, and access to financial services. Developing comprehensive and standardized measures to capture the diverse forms of economic resources across different contexts and populations remains a challenge [20].
2. **Determining Degrees of Interaction:** The degree of interaction between an individual and their connections is a crucial factor in the PsPP calculations. However, quantifying the extent of interaction can be subjective and context-dependent. Establishing reliable and valid scales or measures to assess the degree of interaction across various types

of relationships and social contexts is a critical area for further research [21].

3. **Identifying Local and Global Ecosystem Boundaries:** Defining the boundaries of an individual's local and global ecosystems can be complex, as these ecosystems are not necessarily constrained by pre-defined geographic or administrative boundaries. Factors such as mobility, access to information and communication technologies, and the nature of social and professional networks can influence the delineation of these ecosystems [22].
4. **Accounting for Socio-Cultural Factors:** The perception and interpretation of economic resources may be influenced by socio-cultural factors, such as values, norms, and belief systems. Incorporating these factors into the PsPP framework and developing culturally sensitive measures and assessments is crucial for enhancing its applicability across diverse contexts [23].

To address these challenges, interdisciplinary collaborations and methodological advancements are required.

Researchers may draw upon qualitative and mixed-methods approaches, participatory research techniques, and leveraging emerging technologies (e.g., social network analysis, online data collection) to enhance the measurement and quantification of PsPP components [24].

## Applications in Intervention and Policy Development

The concept of PsPP not only offers a theoretical lens for understanding perceived economic influence but also has practical implications for intervention and policy development:

1. *Psychological Interventions:* By recognizing the psychological dimensions of perceived economic standing, targeted interventions can be designed to address issues such as low self-esteem, diminished aspirations, and negative self-perceptions associated with lower PsPP. These interventions may include cognitive-behavioral therapy, mindfulness-based approaches, or educational programs aimed at fostering a more balanced and resilient outlook towards economic resources and perceived standing [25].
2. *Community-Based Initiatives:* Leveraging the PsPP framework, community-based initiatives can be developed to promote social cohesion, facilitate economic empowerment, and address perceived economic disparities within local ecosystems. These initiatives may involve capacity-building programs, micro-financing opportunities, or community-driven economic development projects [26].
3. *Urban Planning and Development:* Incorporating PsPP considerations into urban planning and development strategies can contribute to creating more inclusive and equitable communities. By understanding the dynamics of perceived economic influence within local ecosystems, policymakers and urban planners can design initiatives that promote economic integration, access to opportunities, and a sense of shared prosperity [27].
4. *Social Welfare and Redistribution Policies:* The concept of PsPP can inform the design and implementation of social welfare and redistribution policies aimed at addressing perceived economic disparities. By considering the psychological dimensions of perceived economic standing, policymakers can develop targeted interventions and support systems that not only address objective economic needs but also promote psychological well-being and a sense of empowerment among individuals and communities [28].

## Cross-cultural dimension

Cultural values, norms, and belief systems can significantly influence how individuals perceive and interpret economic resources and standing. Exploring the cross-cultural variations in the manifestation of Psychological Power Parity (PsPP) is crucial for enhancing the concept's generalizability and applicability across diverse populations. Key cultural dimensions that could shape PsPP include:

*Individualism vs. Collectivism:* In individualistic cultures, perceived economic standing may have a more pronounced impact on self-perception and aspirations, while in collectivistic cultures, communal goals may moderate these effects [29][30].

*Power Distance:* Cultures with high power distance may exhibit a stronger link between perceived economic power and social hierarchies, while low power distance cultures may deemphasize this connection [29][31].

*Attitudes toward Wealth:* Cultural values surrounding material possessions, sources of economic success, and the perceived virtues (or vices) of wealth accumulation could influence attributions about economic standing and associated psychological implications [32][33].

Cross-cultural research employing quantitative and qualitative methods could unveil how the proposed PsPP framework and relationships between economic perception, psychological outcomes, and societal dynamics vary across cultures. Such insights would inform culturally sensitive interventions, policies, and potential refinements to the theoretical model itself, contributing to a more nuanced understanding of the interplay between culture, economic resources, and psychological experiences in a globalized context [34][35].

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