

Modeling the Resilience of Democracy in South Korea:

Toward a System Dynamics Archetype Based on the Constitutional Court's Decision

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1. Introduction

Democracies worldwide are confronting a persistent wave of autocratization and institutional erosion. Recent assessments suggest that democratic decline is no longer confined to a few exceptional cases but has become a broad global pattern affecting a substantial share of the world's population (Nord et al., 2025). Episodes such as the January 6 attack on the U.S. Capitol, democratic backsliding in Brazil, and illiberal tendencies within parts of the European Union indicate that democratic disruption may emerge through both sudden shocks and gradual structural decay.

This study argues that such crises should not be understood merely as the misconduct of particular leaders. Explanations that reduce democratic breakdown to the failures of individual actors are analytically insufficient because they obscure the structural conditions that repeatedly render democratic systems vulnerable to overreach, paralysis, and emergency politics. From a systems thinking perspective, threats to democracy are not anomalies but recurring consequences of the mismatch between rising social complexity and the relatively slow adaptation of institutional arrangements. As political environments become more differentiated, interconnected, and volatile, institutions designed for stability often lag behind changing conditions. This gap generates friction, accumulates strain, and periodically produces democratic crises. In this sense, the threat to democracy is not an eliminable exception but an enduring structural condition.

If this diagnosis is correct, then the central question must shift. The issue is not how to eliminate all threats to democracy—an impossible goal—but how to prevent democratic functions from collapsing too deeply when shocks occur, and how to accelerate recovery afterward. This is the problem of democracy resilience. Accordingly, resilience should be understood not simply as survival after crisis, but as the capacity of a democratic system to absorb shocks, defend its constitutional core, and restore functional legitimacy under adverse conditions. In this respect, resilience has become a central requirement of democratic security in an age of systemic uncertainty.

South Korea provides an especially revealing case for examining this problem. On December 3, 2024, a presidential self-coup (autogolpe) was attempted through the sudden declaration of a state of emergency and martial law. Yet the attempt failed. Citizens mobilized overnight to defend the National Assembly, the legislature moved swiftly to demand the lifting of martial law, and coercive institutions did not fully execute the operation.

The constitutional order was ultimately restored through the Constitutional Court's historic decision to remove the president on April 4, 2025 (Constitutional Court of Korea, 2025).

This case is significant not only because democracy survived, but because it reveals a distinctive pattern of recovery. Even after the immediate crisis was neutralized, the systemic shock did not disappear at once. Rather, the recovery process appears to follow a goal-seeking dynamic in which the system gradually approaches a desired democratic state while the rate of recovery diminishes over time. This makes the South Korean case particularly suitable for System Dynamics analysis.

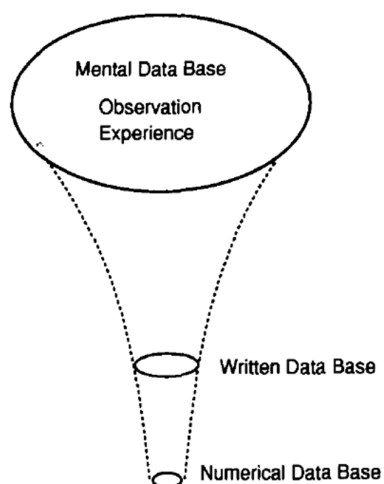
By examining the democratic recovery process triggered by the failed self-coup, this study seeks to develop a System Dynamics archetype of democratic resilience. The aim is not merely to interpret a single national event but to identify a more generalizable structural logic that explains how democratic systems absorb shocks, limit functional degradation, and recover through interacting feedback processes.

2. Methodological Rationale: From Mental Models to Structural Accuracy

This study adopts System Dynamics (SD) to analyze the resilience of South Korean democracy. Unlike approaches that rely primarily on lagged numerical indicators, this study emphasizes the structural information embedded in mental models and written institutional records.

2.1 The Primacy of Mental and Written Data

In the SD tradition, the most critical information for understanding complex systems is not found in numerical databases but in the mental models of actors and written records of institutional decisions. As Jay Forrester emphasized:



“The amount of available information declines, probably by many orders of magnitude, in going from mental to written information and again by another similar large factor in going from written to numerical information.” (Forrester, 1992)

Furthermore, modeling intangibles—such as institutional trust, political attitudes, and the internal pressures of a constitutional crisis—is essential for a valid representation of reality:

“The model defined 250 variables, of which about 95 percent dealt with intangibles such as attitudes of the

management, origins of goals in an organization... internal financial pressures, and relationships to customers.” (Keough & Doman, 1992)

“Mental models are not numerically exact, but they contain an immensely rich collection of information, much of it derived from direct experience.” (Meadows & Robinson, 2007:2)

In this study, the Constitutional Court's decision (2024Hun-Na8), together with the prior Supreme Court and Constitutional Court rulings on the Gwangju Democratization Movement and the prosecution of the Chun Doo-hwan regime, functions as more than a written database. These rulings constitute institutions of recognition (Institutionen der Anerkennung): through them, the proposition that "the martial-law forces were insurgents and the citizens defended the state" became a settled constitutional consensus. It was against this sedimented consensus that legislators and citizens alike could immediately recognize the December declaration as manifestly unlawful. The decision text therefore supplies not only the implicit decision rules of the system but also evidence of the stock of recognition that anchors its resilience.

2.2 Accuracy over Precision

A common critique of modeling social systems is the lack of precise data. However, John Sterman (2000) argues that omitting known structural variables simply because they cannot be measured is scientifically unsound:

“Omitting structures or variables known to be important because numerical data are unavailable is actually less scientific and less accurate than using your best judgment to estimate their values. To omit such variables is equivalent to saying they have zero effect—probably the only value that is known to be wrong!” (Sterman, 2000:853-854)

Therefore, this research prioritizes Accuracy (conformity to the real-world structure) over Precision (numerical exactness). As Donella Meadows noted:

“Accuracy—correctness, conformity to the real world, absence of error; does not necessarily imply precision... ‘About 2’ is an accurate (not precise) estimate of a real-world value of 2.00563. ‘2.97351’ is a precise (not accurate) estimate of a real-world value of 2.00563.” (Meadows & Robinson, 2007:12)

“[The field] devotes tremendous labor, both in data-gathering and computation, to achieving small increases in precision, meanwhile doing little effective testing for general accuracy.” (Meadows & Robinson, 2007:415)

By focusing on the behavioral characteristics of the democratic crisis in South Korea, this study deduces the underlying feedback structures and infers the interactions between Stocks and Flows that govern the system's resilience. More specifically, the study first identifies the observed dynamic pattern of democratic disruption and recovery, then interprets that pattern through a goal-seeking feedback structure, and finally extends the model by introducing accumulated civic capacity as a second stock that conditions recovery.

3. Model Configuration: Deducing Structure from Behavior

This section develops a dynamic model of democratic resilience in South Korea by following a standard System Dynamics procedure: identifying a reference mode and formulating a dynamic hypothesis that can generate the observed pattern. The purpose is not to impose a structure on the case in advance, but to infer a plausible feedback logic from the BOT.

3.1 Reference Mode: The Pulse of Democratic Function

The starting point of model construction is the observed trajectory of democratic system performance during the 2024 constitutional crisis. Figure 1 presents the reference mode of the **Democratic System Function Level**, a conceptual variable that represents the overall level of institutional functionality within a democratic constitutional order.

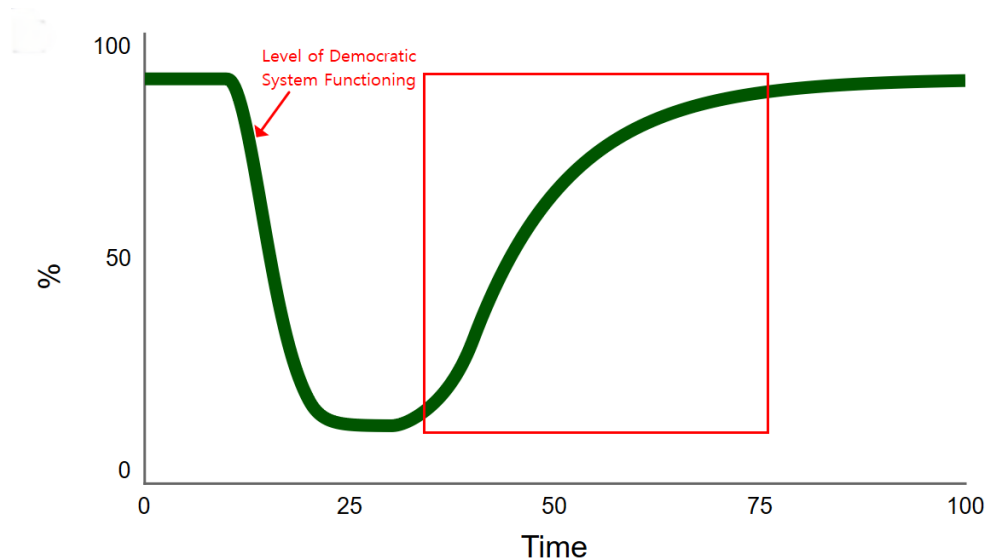


Figure 1. Reference Mode of South Korean Democratic Function

The initial level is set 100 percent below. This reflects the analytical assumption that no real-world democracy fully realizes an ideal democratic condition. Democracy is therefore treated not as a perfect end state but as an always-incomplete and historically contingent achievement.

The sharp decline in Figure 1 represents the immediate disruption triggered by the unconstitutional declaration of emergency martial law on December 3, 2024. At that moment, the functioning of democratic institutions was abruptly impaired. The subsequent recovery phase reflects a sequence of corrective constitutional responses, including the National Assembly's reversal of martial law, the Constitutional Court's impeachment decision, and the restoration of electoral normality through the election of a new president.

The most important feature of this trajectory is not merely the fact of recovery, but the changing rate of recovery. As highlighted in Figure 1, the system recovers rapidly at first, but the pace of improvement gradually diminishes as it approaches its prior level. In System Dynamics terms, this decelerating recovery pattern suggests a goal-seeking process.

3.2 Initial Dynamic Hypothesis: A Conventional Goal-Seeking Structure

Based on the behavioral pattern observed in Figure 1, the first dynamic hypothesis of this study is that the recovery of democratic function follows the logic of a balancing feedback process. Figure 2 introduces the conventional goal-seeking structure as a generic template for interpreting such behavior.

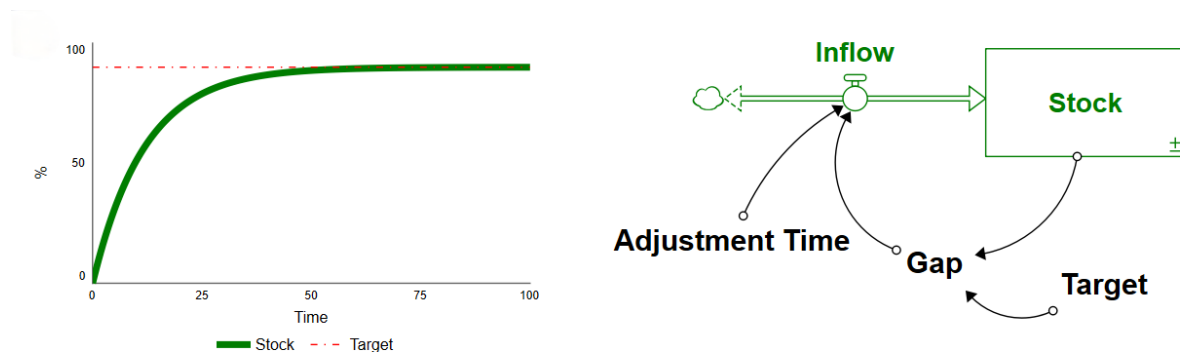


Figure 2. Conventional Goal-Seeking Structure

At this stage, Figure 2 is not intended as a fully specified model of democratic resilience. Rather, it serves as a heuristic bridge between observed behavior and structural reasoning. In a standard goal-seeking system, the gap between the current condition and the target condition drives adjustment. When the gap is large, the rate of adjustment is high; as the gap narrows, the adjustment rate declines. This produces the characteristic pattern of rapid initial change followed by progressively slower convergence toward the target.

The recovery segment of South Korea's democratic crisis shows a behavior closely resembling this conventional pattern. For that reason, the goal-seeking structure provides the first structural clue for model building. The significance of Figure 2 lies not in offering a final explanation, but in establishing that the observed democratic recovery can initially be interpreted through a well-known balancing structure in the System Dynamics tradition.

However, this conventional structure remains analytically incomplete for the purposes of the present study. A generic goal-seeking model explains the form of the recovery curve, but not yet the specifically democratic sources of resilience that made such recovery possible. The next step, therefore, is a conceptual translation: to reinterpret the elements of the

goal-seeking structure in terms appropriate to democratic systems and to identify the historically accumulated capacities that sustain constitutional recovery.

3.3 Conceptual Refinement of Variables: From Quantitative Targets to Perceived Reference Conditions

The conventional goal-seeking structure shown in Figure 2 is useful as an initial dynamic template, but its variables require conceptual refinement before they can be meaningfully applied to democratic crisis processes. In many quantitative policy systems, the target level refers to an explicit optimization goal, such as a desired temperature, an unemployment rate, or a percentage reduction in expenditure. In such cases, the gap between the target and the current state can be treated as a measurable numerical discrepancy.

In political, policy, and judicial systems, however, the relevant “target” often takes a different form. Rather than representing an optimized numerical end-state, it more often serves as a normative reference point or a threshold condition that should not be violated. Typical questions are not “Has the maximum been reached?” or “Has the minimum been achieved?” but rather “Has a constitutional limit been crossed?” or “Was due process preserved?” In such settings, the gap between the target and the current state cannot be understood as a purely objective numerical distance. It must instead be interpreted as a perceived discrepancy, shaped by judgment, framing, and institutional interpretation.

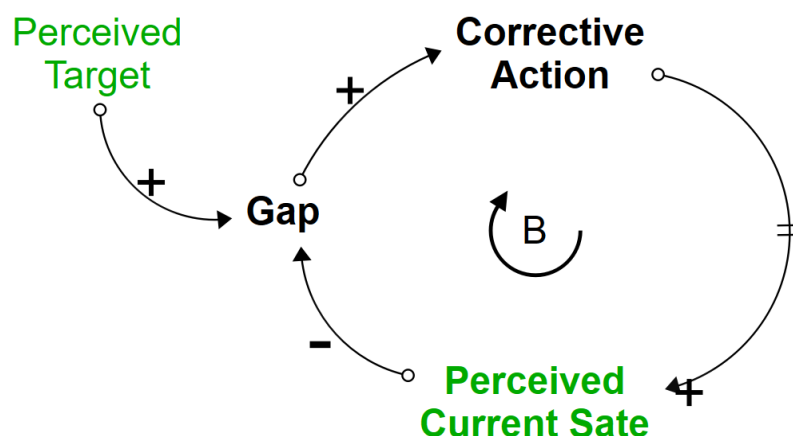


Figure 3 Revised Goal-Seeking Structure

For this reason, the generic variables of the conventional goal-seeking structure are reformulated in Figure 3 as **Perceived Target**, **Perceived Current State**, and **Corrective Action**. This revised formulation makes the structure more appropriate for analyzing political and constitutional processes, in which actors respond not to raw numerical conditions but to interpreted realities and normatively framed threats.

Under longer time horizons, such a structure may also generate overshoot because both perception and institutional response involve delays. However, that possibility is not pursued

in the present study. Since the aim here is to explain the immediate crisis-and-recovery sequence surrounding the declaration of martial law, extending the analysis to longer-run oscillatory dynamics would risk diffusing the central argument.

3.4 Interpreting the Revised Goal-Seeking Structure: The Logic of Martial Law Declaration

Once reformulated in perceptual and normative terms, the revised goal-seeking structure yields an important insight: it helps explain not only the recovery of democratic function but also the logic by which the president justified the declaration of martial law.

The Constitutional Court's decision provides textual evidence for each element of the structure. First, the **Perceived Current State** is reflected in the president's depiction of the nation as being in a condition of paralysis and imminent collapse. According to the Court's account of the public address, the president claimed that state affairs had been paralyzed by repeated impeachments, special investigations, and budget cuts, and that the legislature had become a site of legislative dictatorship threatening the constitutional order. The Court further summarized his position as a perception that governmental paralysis and severe national harm were advancing to a critical level.

Second, the **Perceived Target** appears in the president's articulated aim of defending "free Korea," protecting the constitutional order, and restoring the nation to normality. These statements did not express a numerical policy objective, but a normatively loaded vision of constitutional preservation and national recovery. In this sense, the target served as a perceived reference condition rather than an optimized end state.

Third, the **Corrective Action** corresponds to the declaration of martial law itself, which the president presents as a necessary and unavoidable measure to safeguard the continuity of the republic and eliminate anti-state forces. Within the revised goal-seeking structure, martial law can therefore be interpreted as an attempted corrective intervention generated by the perceived gap between a threatened present condition and a normatively charged target state.

Up to this point, the revised goal-seeking structure has been used to explain the logic of the martial law declaration and, by extension, the sharp decline in the functioning of the democratic system, as represented in Figure 1. The next step is to examine how the same revised structure operated during the recovery phase, and why the restoration of democratic function cannot be explained by a single balancing loop alone.

3.5 Structural Analysis of Resilience: From Perceived Goal to Democratic Sittlichkeit

To rigorously analyze the mechanism of resilience, I return to the reference mode in **Figure 1** and the revised goal-seeking structure in **Figure 3**. Within this framework, the key variables governing the system's restoration are identified as follows:

- **Perceived Current State (A):** The functional level of the democratic system as recognized by stakeholders.
- **Perceived Target Level (B):** The normative benchmark that the system aims to achieve or maintain.
- **Democratic Performance Gap:** The discrepancy between the target and the current state ($\text{Gap} = B - A$).
- **Restoration Effort:** The collective corrective actions triggered by the gap.

Evidence of these restoration efforts is explicitly documented in the **Constitutional Court's decision (2024Hun-Na8)**. The Court noted that the early termination of the unconstitutional martial law was made possible by "**the resistance of citizens and the passive execution of duties by the military and police.**" Furthermore, the record highlights the swift legislative action where "**the National Assembly, even under restricted access by military forces, immediately convened a plenary session and passed the resolution to lift the martial law with a unanimous vote of 190 members.**"

A critical requirement for modeling this resilience is a precise definition of the **Perceived Target Level (B)**. For this variable to function as a robust anchor for restoration, it must satisfy the following four systemic properties:

1. **Dimensional Consistency:** It must share the same qualitative attributes as the 'Perceived Current State' so that a meaningful $\$ \text{Gap} (B - A) \$$ can be calculated within the model.
2. **Stock Characteristics:** To function as a stable goal, it must not fluctuate easily. It should represent the result of long-term accumulation and essentially function as a **Stock** variable.
3. **Separation of Time Scales:** Its rate of change must be significantly slower than the adjustment time of the current state. This timescale separation is crucial for the target to maintain its role as a functional anchor during a crisis.
4. **Attraction Force:** It must act not just as a passive benchmark, but as a gravitational center—an **attraction force**—that pulls the degraded system back toward restoration. This explains the intense public aspiration to reconstruct democracy even when formal institutions have collapsed.

To encapsulate these four properties, this study replaces the generic 'Perceived Target Level' with the term "**Democratic Sittlichkeit**"—the accumulated ethical life of a democratic community, sedimented as a stock of mutual recognition among citizens.

The justification for this substitution is rooted not in the dispositional sociology of habit but in G.W.F. Hegel's concept of *Sittlichkeit* (ethical life), as reconstructed by Axel Honneth. Because Hegel's own texts are notoriously difficult, this study relies on Honneth's authoritative reconstruction in *Das Recht der Freiheit* (The Right of Freedom). Honneth defines *Sittlichkeit* as the institutionalized sum of relations through which social justice is secured under the modern ideal of freedom:

"Hegel bezeichnet die Summe derartiger Gebilde bekanntlich mit dem aristotelisch gefärbten Begriff »Sittlichkeit«; erst mit dieser Kategorie ist in seiner Theorie letztlich

umrissen, wie soziale Gerechtigkeit unter Bedingungen des modernen Ideals der Freiheit gewährleistet werden kann." (Honneth, 2011: 108)

"As is well known, Hegel designates the sum of such entities with the Aristotelian-tinged concept of 'Sittlichkeit' (ethical life); it is only with this category that his theory ultimately outlines how social justice can be guaranteed under the conditions of the modern ideal of freedom." [AI Translation]

This formulation supplies precisely the four properties required of Stock B. *Sittlichkeit* is not a fleeting attitude but the sum of durable institutional forms—an enduring anchor that does not fluctuate easily and that carries genuine attraction force, since it is the very medium in which freedom is realized. Crucially, Honneth specifies what these forms concretely are: the *institutions of recognition* (*Institutionen der Anerkennung*), understood as bundles of normed behavioral practices.

"Für eine derartige Gewährleistung reziproker Verständlichkeit sorgen nach Auffassung Hegels die Institutionen der Anerkennung, also Bündel von normierten Verhaltenspraktiken, die individuelle Ziele »objektiv« ineinandergreifen lassen..." (Honneth, 2011: 86)

"In Hegel's view, such a guarantee of reciprocal intelligibility is provided by the institutions of recognition, that is, bundles of normed behavioral practices that allow individual goals to interlock 'objectively'..." [AI Translation]

In the South Korean context, these "bundles of normed behavioral practices" are concrete and identifiable: the constitutional consensus sedimented through the adjudication of the Gwangju Democratization Movement and the prosecution of the Chun Doo-hwan regime. Through these institutions of recognition, the principle that citizens, not coercive force, are the guardians of the constitutional order became a durable Stock of *Democratic Sittlichkeit* that remains stable even when formal institutions are temporarily seized.

A purely dispositional construct, oriented toward how individuals adapt to and survive within existing power, cannot account for the *dynamism of resistance* exhibited during the crisis. Honneth's theory of recognition supplies exactly this dynamism. Historically, struggles for social recognition have been waged not under the banner of abstract freedom but against concrete experiences of *disrespect* or *misrecognition* (*Mißachtung*):

"...die nach der Französischen Revolution in Kämpfe um soziale Anerkennung verstrickt waren... sie alle kämpften gegen rechtliche und soziale Formen der Mißachtung, die sie als unvereinbar mit Ansprüchen auf Selbstachtung und individuelle Autonomie erlebten..." (Honneth, 2011: 38)

"...those entangled in struggles for social recognition after the French Revolution had not written the slogan of individual freedom on their banners... they all fought against legal and social forms of disrespect,

which they experienced as incompatible with claims to self-respect and individual autonomy..." [AI Translation]

Accordingly, the martial-law declaration can be modeled as a massive act of social *misrecognition* directed at democratic subjects, and the citizens' overnight mobilization to defend the National Assembly as a *struggle for recognition* (*Kampf um Anerkennung*)—the restoration flow that closes the gap between degraded reality (A) and the accumulated norm of recognition (B).

3.6. Initial Archetype of Democratic Resilience: Stage 1

Based on the conceptual substitution established in the previous section, I present the first stage of the **Democratic Resilience Archetype**. This model integrates the *Democratic Sittlichkeit* as the target Stock (B) and the *Level of Democratic System Functioning* as the state Stock (A). The restoration of democracy is modeled as a process of adjusting the gap between these two stocks over time.

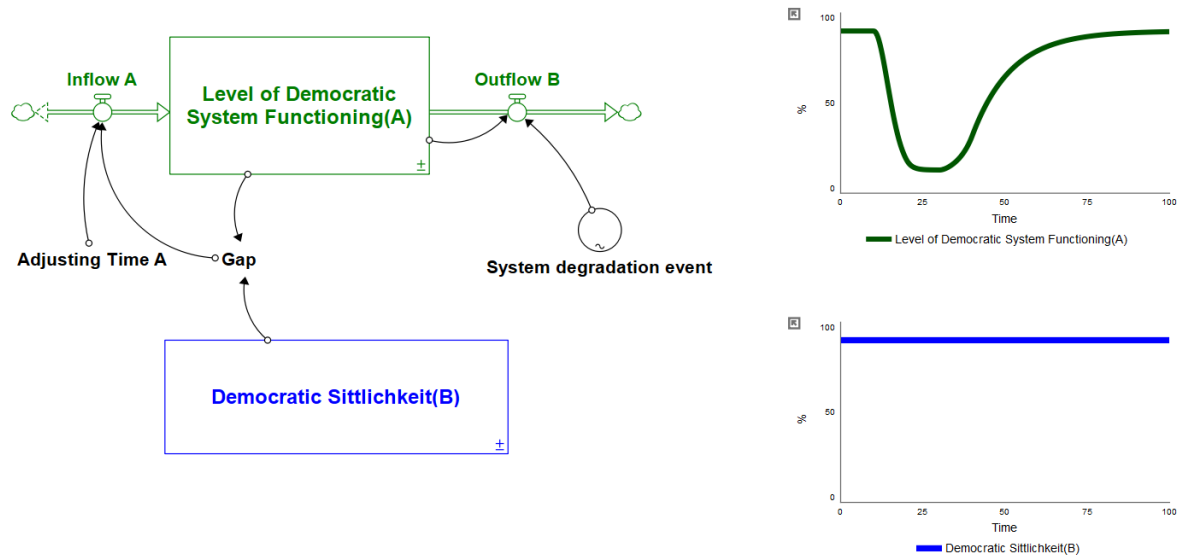


Figure 4: Stage 1 of the Democratic Resilience Archetype and BOT

The core structural logic is defined by the following equations:

$$\text{Inflow_A} = \frac{\text{Gap}}{\text{Adjusting_Time_A}}$$

UNITS: %/Time

$$\text{Gap} = \text{"Democratic Sittlichkeit(B)" - "Level_of_Democratic_System_Functioning(A)"} \\ \text{UNITS: \%}$$

To further refine this model, I perform a systemic "thought experiment" on the nature of Stock B:

1. Does the Democratic Sittlichkeit maintain its level indefinitely once internalized? (**Outflow analysis**)
2. Is the Democratic Sittlichkeit influenced by changes in the functional state of institutions? (**Feedback analysis**)
3. How can Democratic Sittlichkeit be advanced or "recharged"? (**Inflow analysis**)

3.7 Deducing the Resilience Archetype: Philosophical Foundations of Social Entropy

To answer whether the accumulated stock of recognition persists indefinitely, one must ask whether any institution sustains itself without active reproduction. Hannah Arendt emphasizes that entry into the public realm requires courage (Arendt, 2018); public life is not self-sustaining. This intuition receives a precise formulation in Stiegler's account of the *Entropocene* and its counter-movement, the **Neganthropocene** (Stiegler, 2018): contemporary societies produce entropy on a massive scale, short-circuiting the very circuits of recognition that sustain ethical life. The decay claim is not rhetorical pessimism but a **structural requirement**: to omit an outflow from Stock B would assert that recognition, once institutionalized, persists indefinitely without reproduction—and, as Sterman (2000) warns, omitting a known structure assigns it a value of zero, the one value known to be wrong. This necessity is internal to Honneth's framework as well: because recognition must be continuously guaranteed through the institutions of recognition, any cessation of that guarantee entails erosion. The entropic outflow is therefore necessary for structural accuracy.

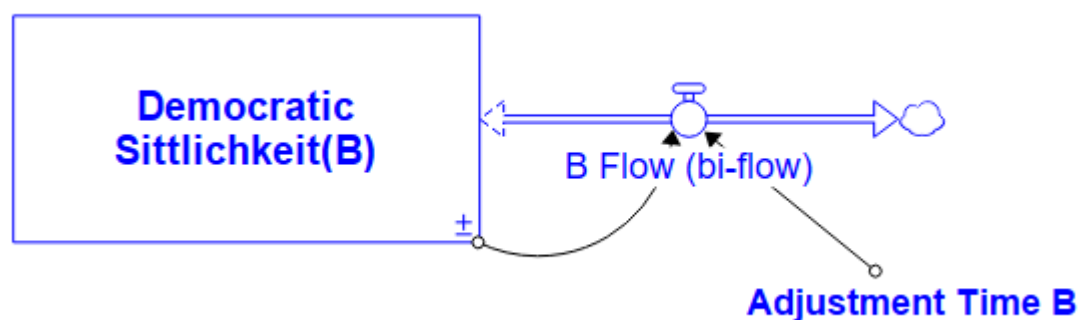


Figure 6 Simplified Structure of Social Entropy

The model can be further refined by internalizing the feedback relationship between Stock A and Stock B. As shown in Figure 7, once Democratic_Sittlichkeit(B) is allowed to adjust in response to the actual state of the functioning of the democratic system (A), three analytically distinct scenarios emerge.

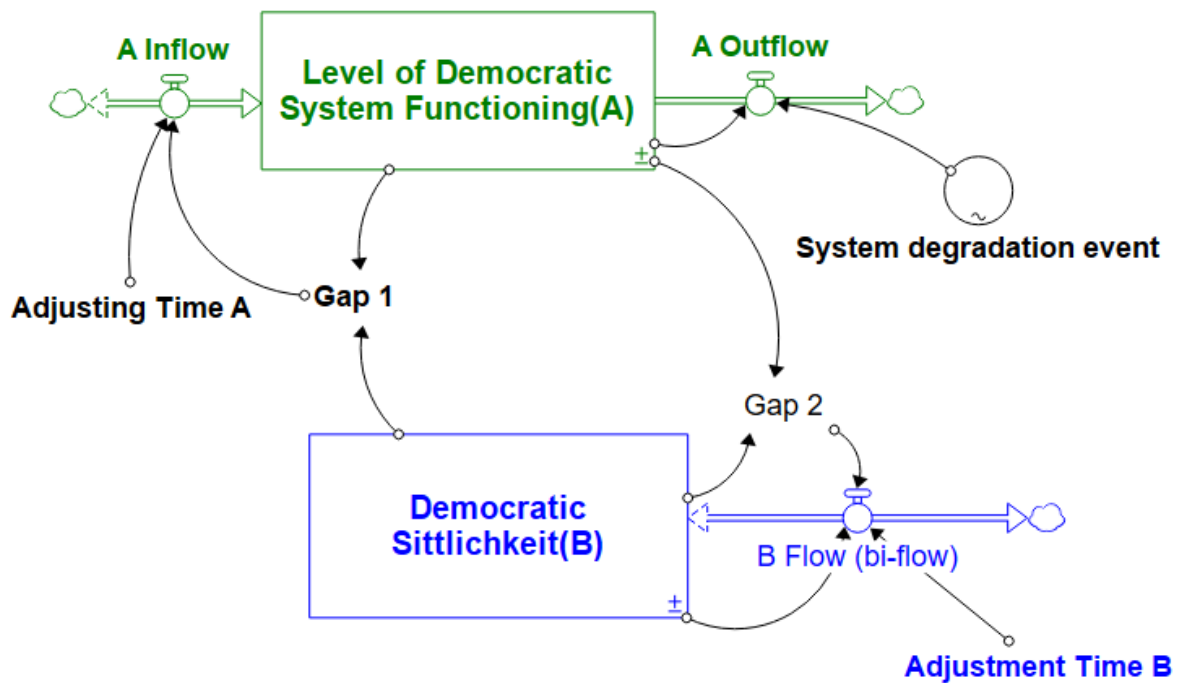


Figure 7. Feedback structure between Stock A and Stock B

When **Gap = 0**, the democratic system and the citizenry are aligned. Yet even this apparently balanced condition is not permanently stable. In the absence of active reinforcement, social entropy gradually erodes Democratic Sittlichkeit(B) over time.

When **Gap > 0**, accumulated democratic dispositions exceed the current level of institutional performance. In this case, the system is pulled upward toward the level of Democratic Sittlichkeit(B), which functions as an attractive force for democratic recovery.

When **Gap < 0**, institutional performance temporarily exceeds the level of Democratic Sittlichkeit(B). This may occur under an exceptional political system or leadership. Even in such a case, however, the higher institutional condition cannot be assumed to endure indefinitely. Unless reinforced, the system remains exposed to downward pressure from the lower level of Democratic Sittlichkeit(B).

The broader implication of this feedback structure is clear: **a democratic system cannot sustainably exceed the level of its Democratic Sittlichkeit(B), and that Democratic Sittlichkeit(B) itself remains vulnerable to gradual erosion.** Democratic resilience, therefore, depends not only on institutional design but also on the long-term reproduction and renewal of the civic dispositions that support it.

4. Final Archetype of Democratic Resilience and Its Implications

To address the structural limitations identified in the previous sections, a mechanism for the active reinforcement of Democratic Sittlichkeit must be introduced. Crucially, this reinforcement cannot be derived from the performance of the democratic system itself (Stock A). It must instead operate independently.

4.1 The Complete Model: Independent Inflow for Democratic Sittlichkeit(B)

If the accumulation of Democratic Sittlichkeit depends solely on institutional performance, the system becomes self-referential and incapable of regenerating the very conditions that sustain it. For this reason, the inflow to Stock B is modeled as an autonomous process, as shown in Figure 8.

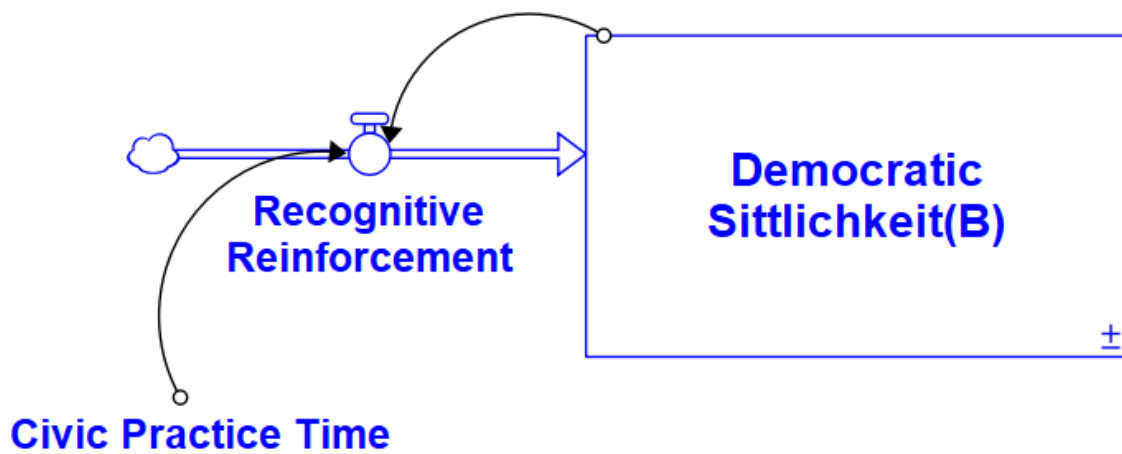


Figure 8. Independent Reinforcement Structure of Stock B

The core formulation is as follows:

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Recognitive Reinforcement
= IF "Democratic_Sittlichkeit(B)"=100
THEN 0
ELSE "Democratic_Sittlichkeit(B)"/Civic_Practice_Time {UNIFLOW}
    UNITS: %/Time

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The independent inflow, *Recognitive Reinforcement*, captures autonomous civic and institutional practices that replenish *Democratic Sittlichkeit* irrespective of the current functioning level. Foremost among these is the ongoing institutionalization of recognition—the construction of historical safeguards such as the Gwangju and Chun Doo-hwan adjudications—through which past struggles for recognition are sedimented into durable constitutional form. Following Arendt and Stiegler, these neganthropic practices of thinking (*penser*) and caring (*panser*) counteract thoughtlessness and sustain the circuits of recognition.

4.2 Philosophical Grounding of Civic Reinforcement

The necessity of such an endogenous reinforcement process can be illuminated through philosophical reflection.

In *Eichmann in Jerusalem*, Hannah Arendt emphasizes that the greatest danger lies not in deliberate evil, but in “thoughtlessness.” She argues that the failure to think critically enables systemic harm on a massive scale. This insight underscores the importance of cultivating the capacity for independent judgment as an ongoing civic practice (Hannah, 2006:287-288).

Similarly, Bernard Stiegler highlights the importance of *penser* (to think) and *panser* (to care) as active responses to the entropic tendencies of contemporary society. In his view, countering social entropy requires deliberate and sustained practices of reflection and care.

Taken together, these perspectives suggest that Democratic Sittlichkeit(B) does not reproduce itself automatically. It must be actively maintained and continuously regenerated through practices of thinking, engagement, and care.

4.3 Simulation Results and System Implications

The simulation results presented in Figure 9 illustrate the impact of introducing this independent reinforcement mechanism.

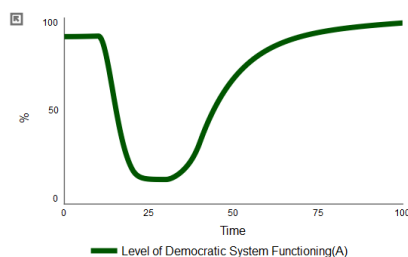
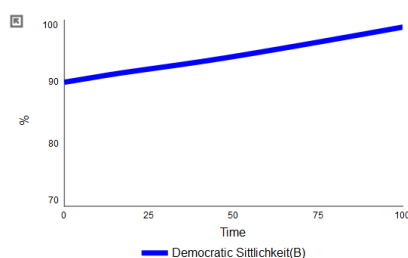


Figure 9. Simulation of Co-evolution between System Function and Democratic Sittlichkeit(B)

Two key implications emerge from this structure.



First, the maintenance of democratic systems requires continuous investment in Democratic Sittlichkeit(B) at the level of individuals and civil society, independent of formal political institutions. Without such efforts, the system cannot even sustain its current level, due to the persistent effects of social entropy.

Second, when such endogenous reinforcement is present, the level of democratic system functioning (A) and Democratic Sittlichkeit(B) can co-evolve upward. In this case, institutional performance is not merely restored after disruption but can progressively improve as civic capacity strengthens.

4.4 The Integrated Archetype of Democratic Resilience

The preceding sections have introduced the key structural components of democratic resilience: the goal-seeking adjustment of institutional performance (Stock A), the

accumulated Democratic Sittlichkeit(B), the entropic decay of civic dispositions, and the independent reinforcement of civic capacity.

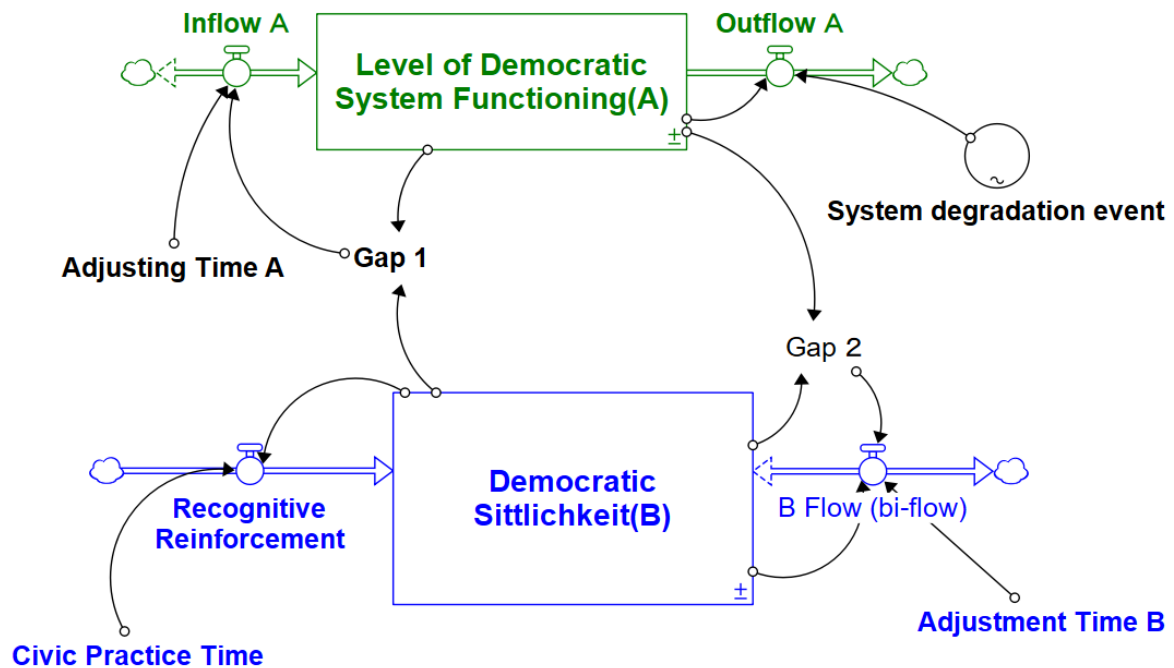


Figure 10. Integrated Archetype of Democratic Resilience

In this final structure, democratic resilience is represented as a two-stock system governed by interacting feedback processes.

First, the level of democratic system functioning (A) adjusts toward the level of Democratic Sittlichkeit(B) through a goal-seeking mechanism. This process explains how democratic systems recover following disruption.

Second, Democratic Sittlichkeit(B) is not static. It is subject to gradual erosion through an entropic outflow, reflecting the structural tendency of social systems toward decay.

Third, Democratic Sittlichkeit(B) is simultaneously reinforced through an independent inflow generated by civic practices. This inflow operates outside the formal political system and represents the continuous reproduction of democratic dispositions.

Finally, a feedback relationship between A and B internalizes the interaction between institutional performance and civic capacity, allowing the system to capture co-evolutionary dynamics.

Taken together, this integrated structure reveals that democratic resilience is not a single process but the outcome of multiple interacting mechanisms: recovery, decay, reinforcement, and feedback.

5. Conclusion

This study has interpreted the process of democratic recovery in South Korea—from the president's declaration of martial law, through its blockage by civic and institutional resistance, to the Constitutional Court's impeachment decision—through the lens of System Dynamics. Because the democratic recovery process in South Korea is still ongoing, the model proposed here cannot yet be validated against a fully completed historical outcome. This remains an important limitation of the study.

Even with this limitation, however, the study offers two major implications.

The first is methodological. This research constitutes an experimental attempt to build a System Dynamics model of a complex political process by relying not primarily on numerical data, but on mental models, written institutional records, and behavior-based structural inference. The study has shown that one of the distinctive strengths of System Dynamics lies in its capacity to interpret system behavior through operational thinking and to leverage the transferability of system structures to infer a plausible archetype from an observed dynamic pattern. In the absence of sufficient numerical data, structured reasoning and theoretical argument can serve as an alternative path to model construction. For that reason, the cultivation of rigorous modes of thinking is not external to modeling, but internal to it.

The second implication concerns democratic resilience itself. Through the structural reasoning developed in this paper, resilience was modeled not as a simple institutional rebound but as a function of the relationship between democratic system functioning and the Democratic Sittlichkeit. The analysis suggests that reliance on the social, educational, or political system alone is insufficient for strengthening Democratic Sittlichkeit. Because of the entropic tendencies internal to social systems, democratic functioning cannot sustainably exceed the level of Democratic Sittlichkeit that supports it. For this reason, efforts to reproduce and elevate Democratic Sittlichkeit must also emerge from spaces relatively independent of the formal political system, including civic associations and individual practices.

This study has highlighted, through Arendt and Stiegler, the importance of thinking and mutual care as exemplary practices for countering social entropy. These should not be understood as the only possible answers. The forms of practice required to renew Democratic Sittlichkeit may vary across social, cultural, and historical contexts. Yet one conclusion remains general: no democracy can remain resilient without continuous practices through which citizens learn to think, judge, and care beyond the inertia of the existing system.

Ultimately, the central lesson of this study is that threats to democracy should not be treated as anomalies that can be permanently eliminated. They are recurring features of complex democratic life. What can vary, however, is the degree to which a democracy is prepared to absorb shock, resist collapse, and recover its constitutional function. In that sense, democratic threat may be a constant, but democratic resilience remains a variable—and one that must be deliberately cultivated.

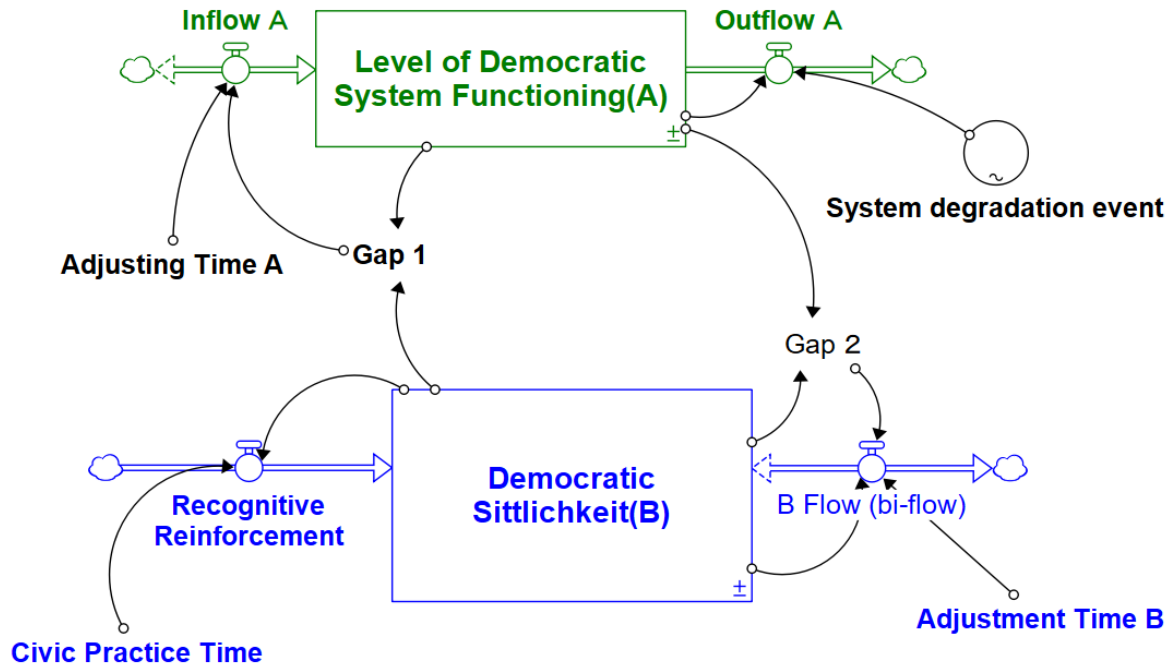
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Equations



$$\text{"Democratic_Sittlichkeit(B)"(t)} = \text{"Democratic_Sittlichkeit(B)"(t - dt)} + (\text{Recognitive_Reinforcement} - \text{"B_Flow_bi-flow"}) * dt$$

$$\text{INIT "Democratic_Sittlichkeit(B)" = 90}$$

$$\text{UNITS: \%}$$

$$\text{"Level_of_Democratic_System_Functioning(A)"(t)} = \text{"Level_of_Democratic_System_Functioning(A)"(t - dt)} + (\text{Inflow_A} - \text{Outflow_A}) * dt$$

$$\text{INIT "Level_of_Democratic_System_Functioning(A)" = 90}$$

$$\text{UNITS: \%}$$

$$\text{"B_Flow_bi-flow"} = \text{IF Gap_2=0 THEN "Democratic_Sittlichkeit(B)"/Adjustment_Time_B ELSE Gap_2/Adjustment_Time_B}$$

$$\text{UNITS: \% / Time}$$

$$\text{Inflow_A} = (\text{Gap_1}) / \text{Adjusting_Time_A}$$

$$\text{UNITS: \% / Time}$$

$$\text{Outflow_A} = \text{"Level_of_Democratic_System_Functioning(A)" * System_degradation_event}$$

$$\text{UNITS: \% / Time}$$

*Recognitive_Reinforcement = IF "Democratic_Sittlichkeit(B)"=100 THEN 0 ELSE
"Democratic_Sittlichkeit(B)"/Civic_Practice_Time
UNITS: %/Time*

*Adjusting_Time_A = 12
UNITS: Time*

*Adjustment_Time_B = 5000
UNITS: Time*

*Civic_Practice_Time = 1000
UNITS: Time*

*Gap_1 = ("Democratic_Sittlichkeit(B)"-"Level_of_Democratic_System_Functioning(A)")
UNITS: %*

*Gap_2 = "Democratic_Sittlichkeit(B)"-"Level_of_Democratic_System_Functioning(A)"
UNITS: %*

*System_degradation_event = GRAPH(TIME)
Points: (0.00, 0.000), (10.00, 0.000), (20.00, 0.500), (30.00, 0.500), (40.00, 0.000), (50.00,
0.000), (60.00, 0.000)
UNITS: 1/Time*

The unit consistency test was passed