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## **Full Network Analysis (5G vs Non-Conspiracy)**

Below is a detailed analysis of all metrics comparing the **5G Conspiracy** and **Non-Conspiracy** networks.

The interpretation focuses on connectivity, structure, community behavior, and information flow.

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### **1. Nodes**

- **5G: 94 nodes**
- **NON: 55 nodes**

#### **Analysis:**

The 5G network contains significantly more users involved in spreading or engaging with the topic.

This indicates a larger, more active community compared to the NON network.

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### **2. Edges**

- **5G: 525 edges**
- **NON: 83 edges**

#### **Analysis:**

The 5G network has far more interactions and relationships between users, suggesting stronger engagement and higher connectivity.

The NON network has limited interactions.

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### **3. Average Degree**

- **5G: 5.585**
- **NON: 1.509**

**Analysis:**

A much higher average degree in the 5G network means:

- Users engage with more people.
- The network forms stronger central hubs.
- Information can circulate quickly due to dense local connections.

The NON network is sparse and weakly connected.

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**4. Density**

- **5G: 0.06**
- **NON: 0.028**

**Analysis:**

The 5G network is more tightly connected relative to its size.

Higher density means:

- Faster information diffusion
- Greater cohesion among clusters

The NON network has low density → weaker internal links.

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**5. Modularity**

- **5G: 0.257 (5 groups)**
- **NON: 0.589 (9 groups)**

**Analysis:**

- **Lower modularity in 5G** → communities are more merged and interconnected.
- **Higher modularity in NON** → the network is fragmented into many separate groups that don't interact often.

This means:

- 5G network = unified narrative
- NON network = scattered conversations, no central theme

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## 6. Weakly Connected Components (WCC)

- **5G: 1**
- **NON: 5**

### Analysis:

The entire 5G network is one big component → all users are connected directly or indirectly.

The NON network has 5 disconnected groups → information does not flow easily across the network.

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## 7. Strongly Connected Components (SCC)

- **5G: 20**
- **NON: 28**

### Analysis:

A higher number of SCCs in the NON network indicates:

- More directionally isolated groups
- Less mutual interaction between nodes

The 5G network is still more cohesive and integrated.

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## 8. Diameter

- **5G: 5**
- **NON: 7**

### Analysis:

Smaller diameter in 5G → the maximum distance between any two users is shorter.

This means:

- Information travels more efficiently
- Users are more reachable across the network

NON's larger diameter makes it slower and less efficient for spreading information.

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## 9. Average Path Length

- **5G: 2.9**
- **NON: 3.63**

### Analysis:

Users in the 5G network require fewer steps to reach each other.

This indicates:

- Higher efficiency
- Closer connections
- Stronger global communication

NON requires more hops → slower communication.

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## 10. Average Clustering Coefficient

- **5G: 0.381**
- **NON: 0.008**

### Analysis:

Very high clustering in the 5G network means:

- Tight-knit groups
- Echo chambers (closed loops of interaction)
- Reinforcement of conspiracy beliefs

The NON network has almost **no clustering** → users do not form stable circular groups or echo chambers.

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## Overall Summary

- **The 5G Conspiracy network is larger, more connected, more cohesive, and has strong echo chambers.**
- **The Non-Conspiracy network is smaller, weakly connected, and heavily fragmented across different unrelated groups.**

- **Information spreads much faster and more efficiently in the 5G network.**
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