



# Network Analysis of Middle Eastern Regional Conflict: Findings and Policy Implications

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# Findings BLUF



- **Two Main Spheres of Influence**
  1. Shia and
  2. US and Sunni States
- **Da'esh and other regional jihadists ability to transform regional dynamics is restricted**
  - limited to playing the role of spoiler through terrorist attacks
- **Jordan's structural position in the network makes it the potentially most influential actor**, provided it had the capacity (military, economic, political)
- **Russia is in a structural position in the network to have more influence than the U.S. – the time is now to blunt their influence**
- **Sunni tribes** in Iraq are in an entirely ambiguous position in the network;
  - their grievances are likely to persist and their alliances to be shifting and unexpected.
- **A post-Da'esh world** eliminates Da'esh violence, but may actually set the region up for a broader conflict with unexpected alliances that cross-cut ethno-religious identities
  - This **conflict** may or may not result in more **violence**
  - **Key is not to over-react to insurgent attacks from jihadists**

## Data

- Characterized relations between key actors in the Middle East along 5 dimensions:
- **Security**
  - Is X's security positively impacted by Y's security?
- **Prestige**
  - If X has a positive relationship with Y, does it increase X's prestige?
- **Economic**
  - If Y is benefitted economically, does it benefit X?
- **Identity**
  - Do X and Y share an identity?
- **Domestic**
  - If X as a positive relationship with Y, does it enhance X's political position at home?

## Method

- Employed traditional and recently developed social network analysis metrics to assess:
  - Grouping of allies
  - Stability of the regional system
  - Relative Influence of actors on the regional system

*Why is it important to unpack the different patterns of regional relations?*

Because we will never explain regional actors' behaviors or forecast regional futures if we do not consider the different types of interests, conflicts and dependencies at play.

## Actors

- **Non-State**

- Da'esh
- Ahrar al Sham
- Fath al Sham (former Nusra)
- FSA
- YPG
- PKK
- KPG
- PUK
- PMF
- Hezbollah
- Sahwah
- Iraqi Sunni

- **Regional States**

- Israel
- Turkey
- Assad Regime
- Gol
- Iran
- Jordan
- KSA
- Qatar
- UAE

- **Global Powers**

- US
- Russia

- Had to bound system
- Considered three scenarios:
  - March 2017 Baseline
  - Oct 2017 (Da'esh holds territory and Qatar alienated)
  - Post-Da'esh world (lost territorial holdings)
- Each Actor's Interests assessed via:
  - Discourse analysis
  - Analysis of policy literature
  - SME interviews
- Actor connections assessed as
  - 1 Positive
  - -1 Negative
  - 0 Null
    - *Ambivalent (both positive and negative elements)*
    - Unknown
    - Non-existent

- The metrics DO NOT assess actor attributes (\$, military power, demographics) on purpose – This study assesses the **effects of POSITION** in the **regional networks** on the stability of an actor's stability of relations and ability to influence the system
  - An actor, no matter how capable cannot influence a system unless its structural position allows it
  - Weak actors can emerge as dark horses if properly connected
- Correlations between Interest Matrices
- Inventory of Transitive/Intransitive Triads (Balance Theory)
  - Used UCINET 6.0 Balance Counter
  - System Perspective
  - Individual Actor Perspectives
- PII (Political Independence Index) (Smith et al. 2014)
  - Measure of ability to influence network via positive versus negative connections
- Girvan-Newman (2002) Community Detection Algorithm
  - Determines groups based on actors with more positive in-group vs. out-group ties
  - Used to illustrate groups of allies, descriptive



# Oct 2017 Alienated Qatar – QAP Correlations



	Alienated QatarDomestic	Alienated QatarEconomic	Alienated QatarIdentity	Alienated QatarPrestige	Alienated QatarSecurity
Alienated QatarDomestic	1	0.46634	0.590782	0.638557	0.581595
Alienated QatarEconomic	0.46634	1	0.322485	0.440685	0.511724
Alienated QatarIdentity	0.590782	0.322485	1	0.502471	0.451985
Alienated QatarPrestige	0.638557	0.440685	0.502471	1	0.660512
Alienated QatarSecurity	0.581595	0.511724	0.451985	0.660512	1

- All correlations statistically significant at the .001 level
- Most interests highly inter-correlated – lack of expected dimensionality
- Lowest correlation is between Identity and Economic Interests
- **Take-away:** Don't predict behavior based solely on identity – strange bedfellows are to be expected



# No Da'esh – QAP Correlations



	No DaeshDomestic	No DaeshEconomic	No DaeshIdentity	No DaeshPrestige	No DaeshSecurity
No DaeshDomestic	1	0.438989	0.598666	0.597652	0.534392
No DaeshEconomic	0.438989	1	0.330311	0.355532	0.451705
No DaeshIdentity	0.598666	<b>0.330311</b>	1	0.501432	0.476574
No DaeshPrestige	0.597652	0.355532	0.501432	1	0.61631
No DaeshSecurity	0.534392	0.451705	0.476574	0.61631	1

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**No difference in correlations after demise of Da'esh!  
The relationships between actors' interests do not really change**

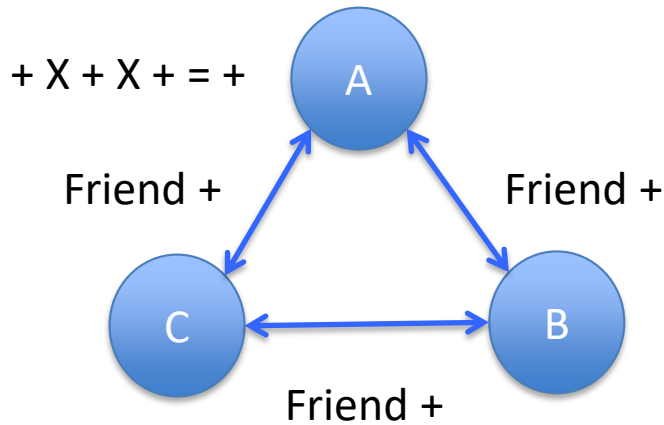


# ★ Balance Theory: Transitivity is the Glue that Keeps Society Together

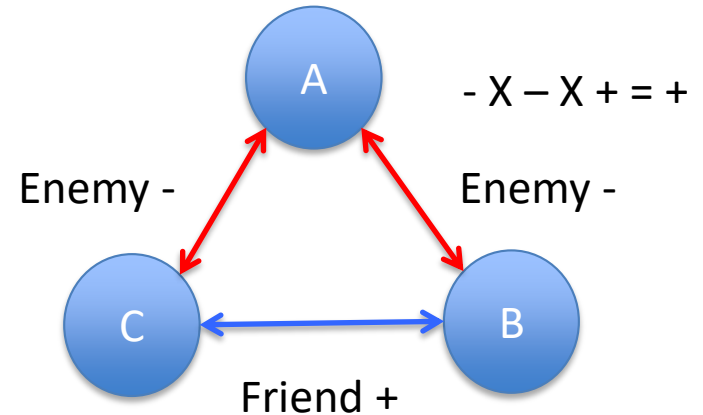


Both networks are transitive and socially stable

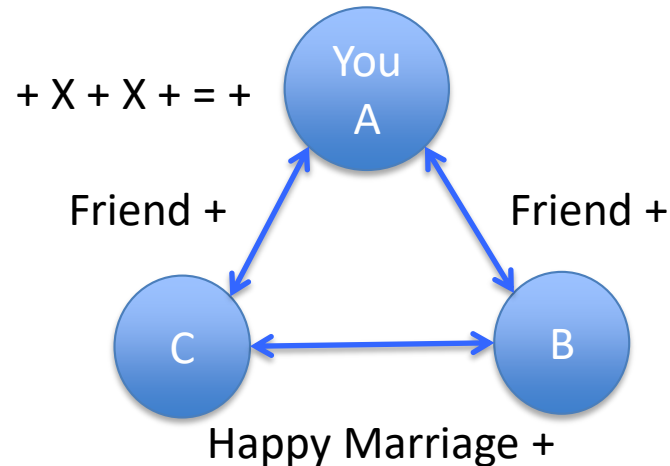
“Circle of Friends”



“Enemy of my Enemy is my Friend”



“Married Friends”



Imagine case where You have married friends and everyone likes one another



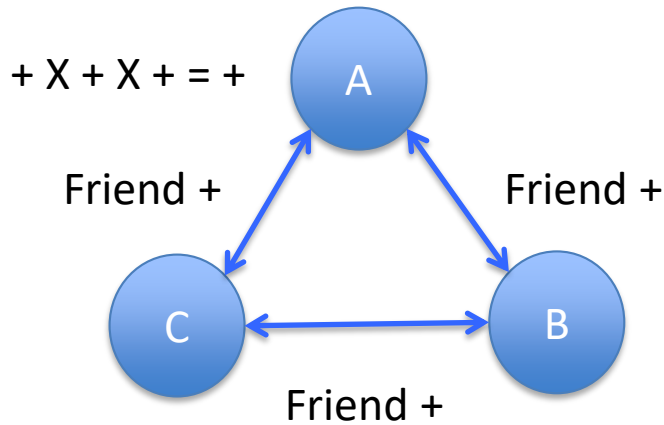


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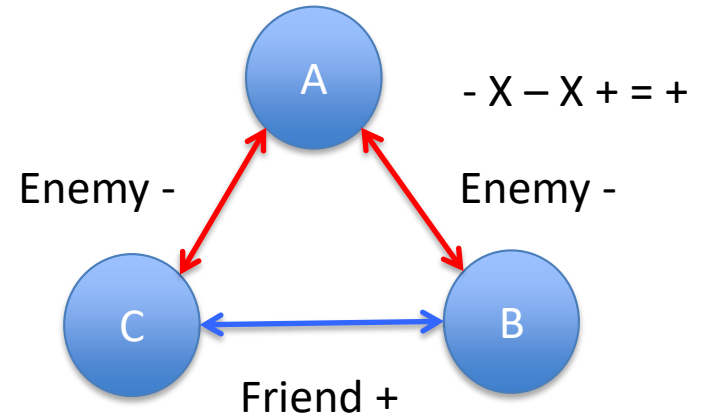


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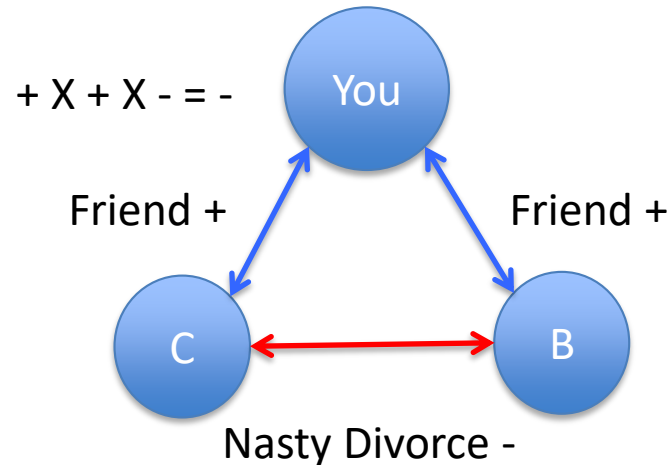
“Circle of Friends”



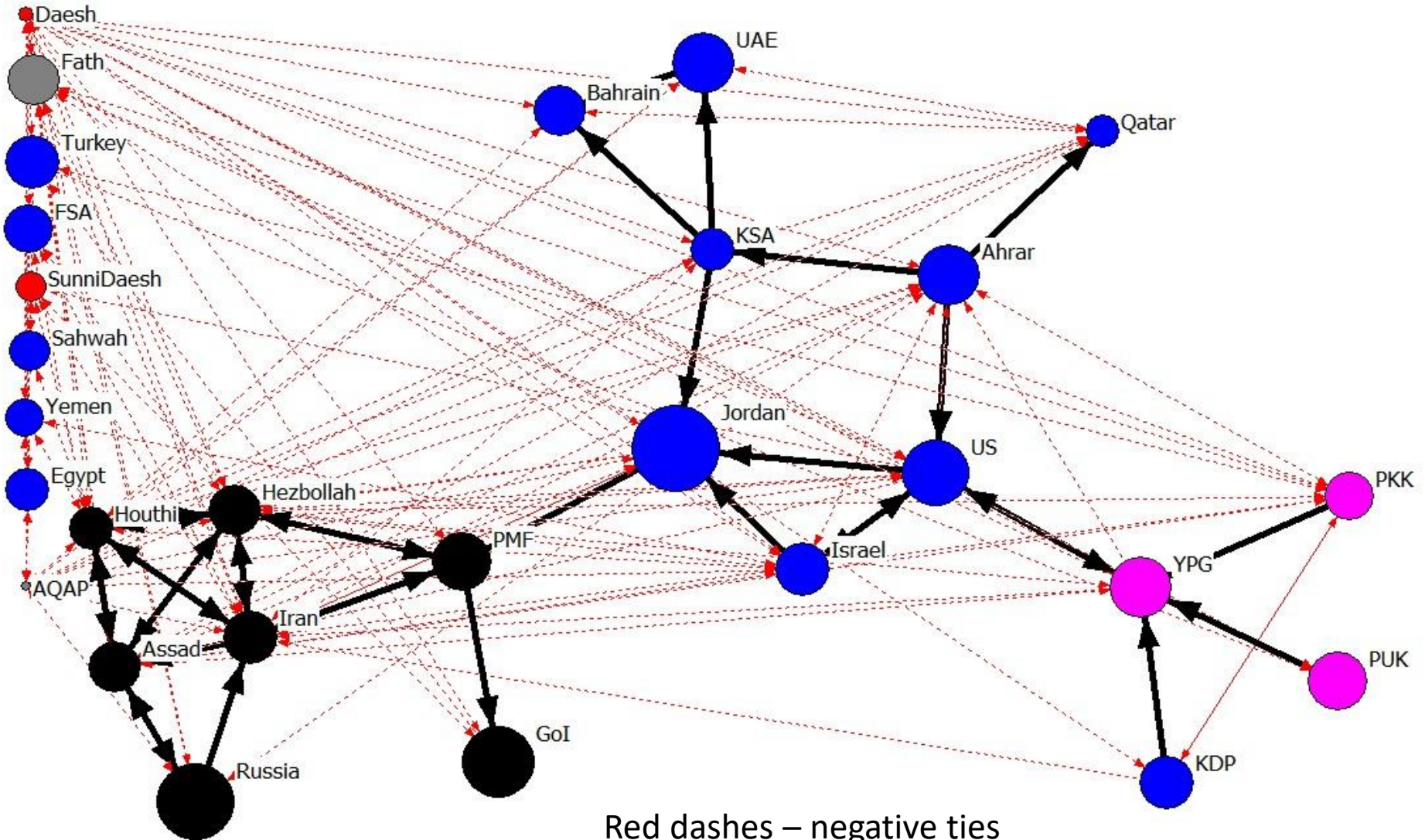
“Enemy of my Enemy is my Friend”

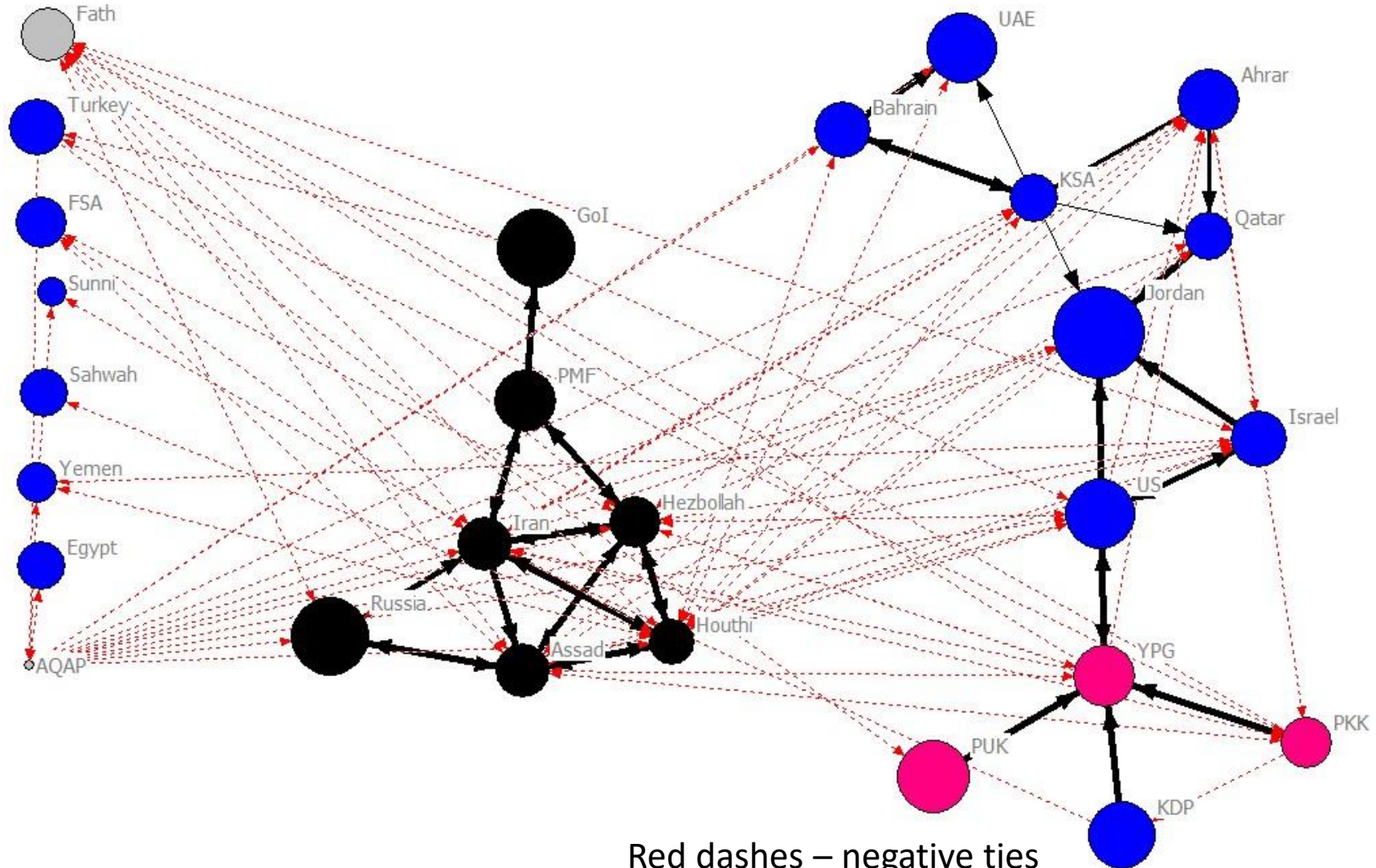


“Awkward”



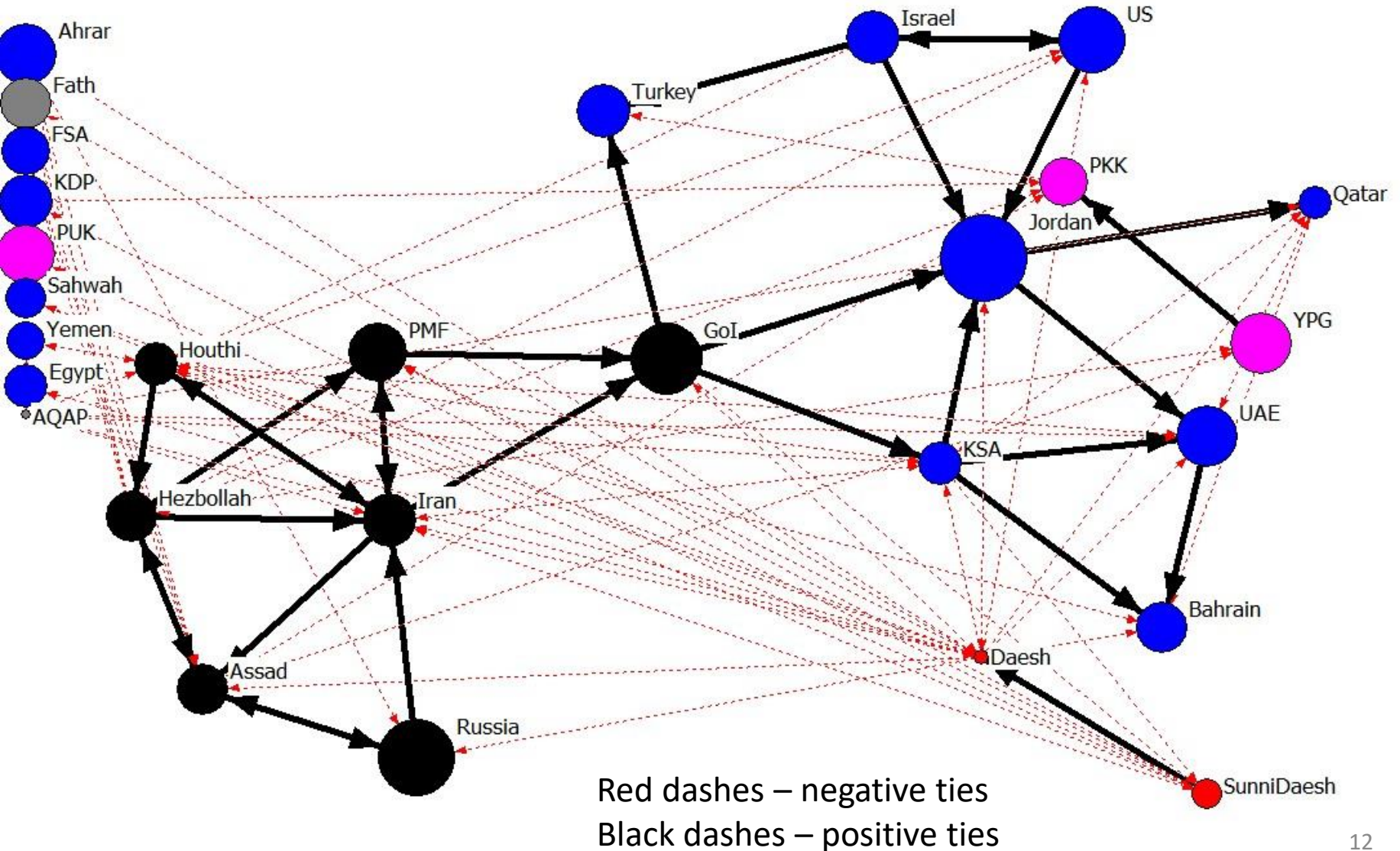
When friends divorce, the triad becomes intransitive and unstable; we usually lose a friend in the divorce



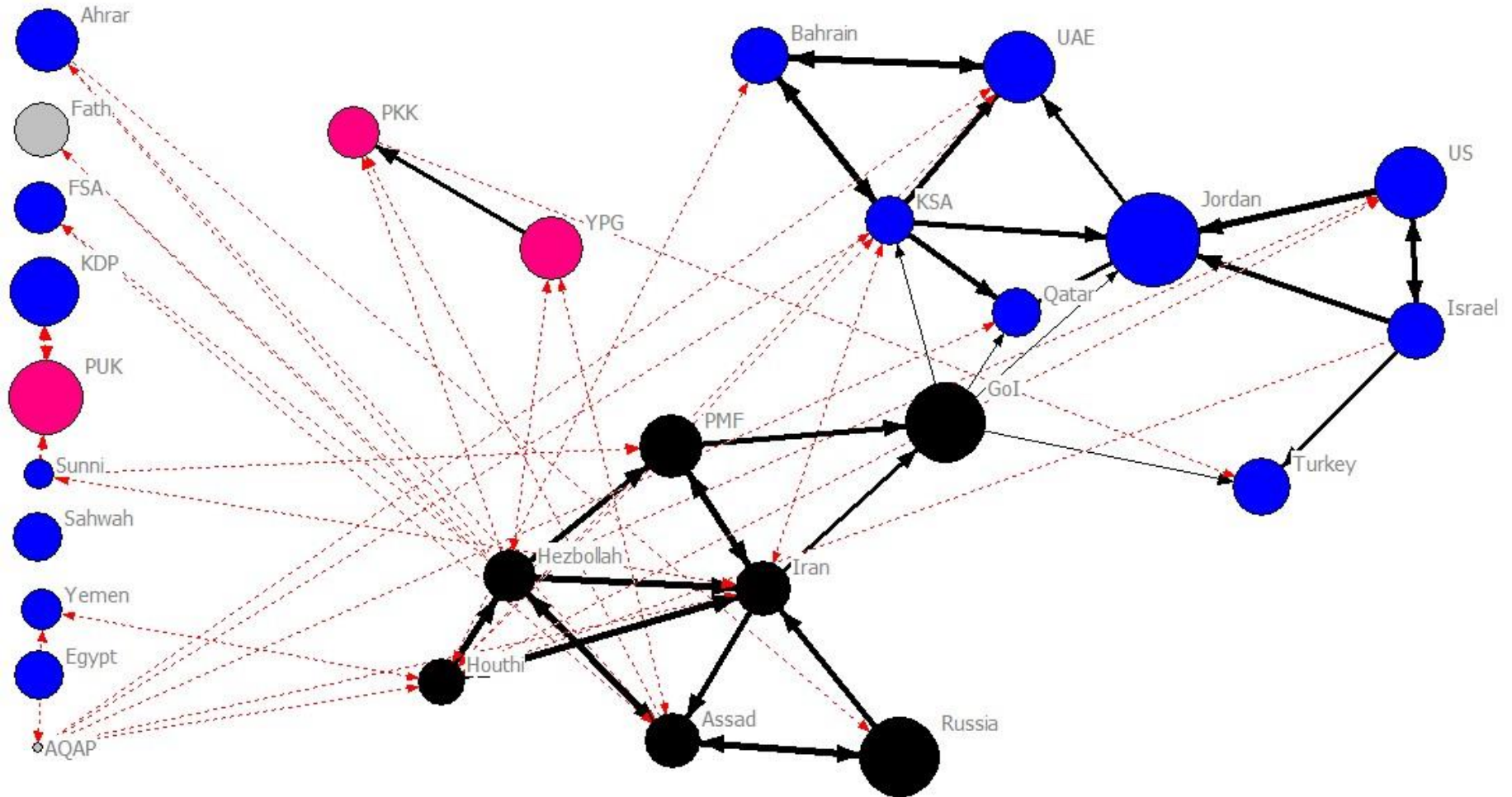


Red dashes – negative ties  
 Black dashes – positive ties





# Post-Da'esh Middle East Regional Network: Economic Ties



Red dashes – negative ties  
Black dashes – positive ties



# System Transitivity and Balance

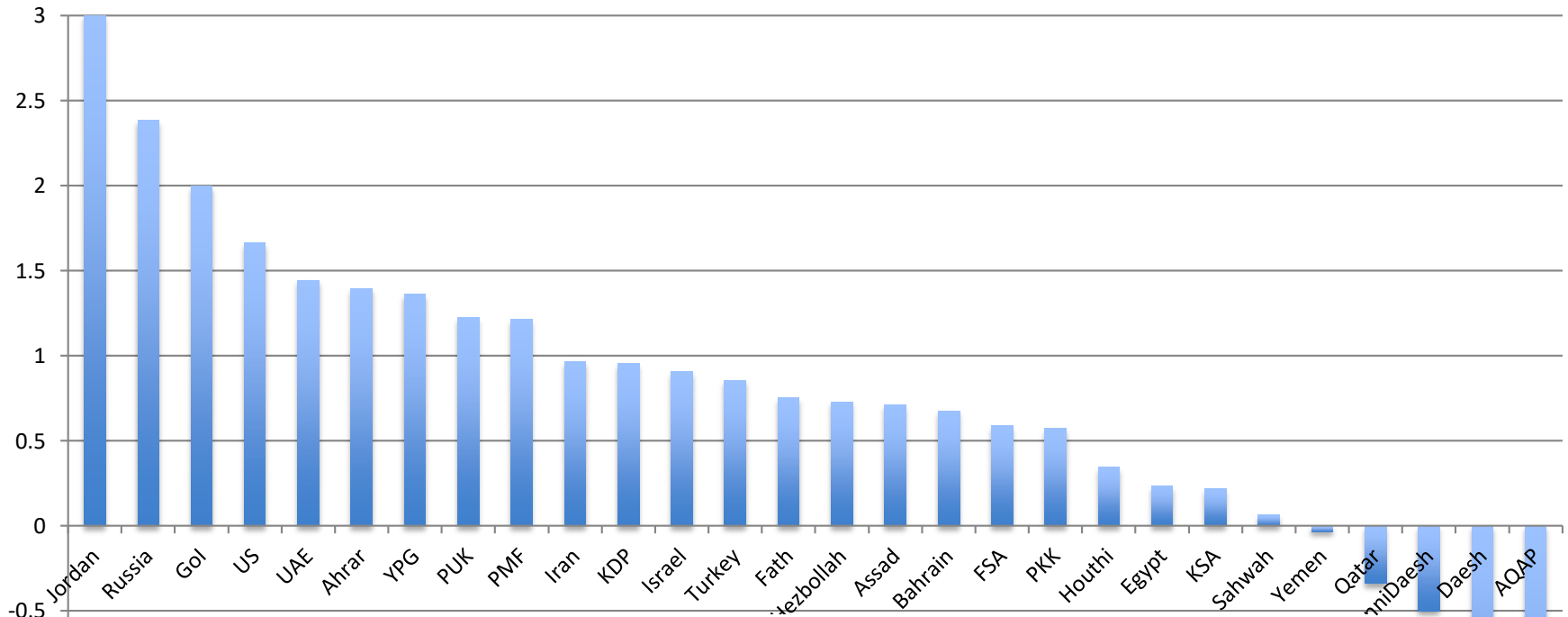


Scenario	Null Triads	Transitive Triads	Intransitive Triads
Oct 2017	71.8%	14.8%	17.9%
No Da'esh	70.0%	16.7%	12.6%

- Elimination of Da'esh results in a marginal increase in regional stability
- **This may indicate that final defeat of Da'esh would not result in meaningful increase in regional stability**



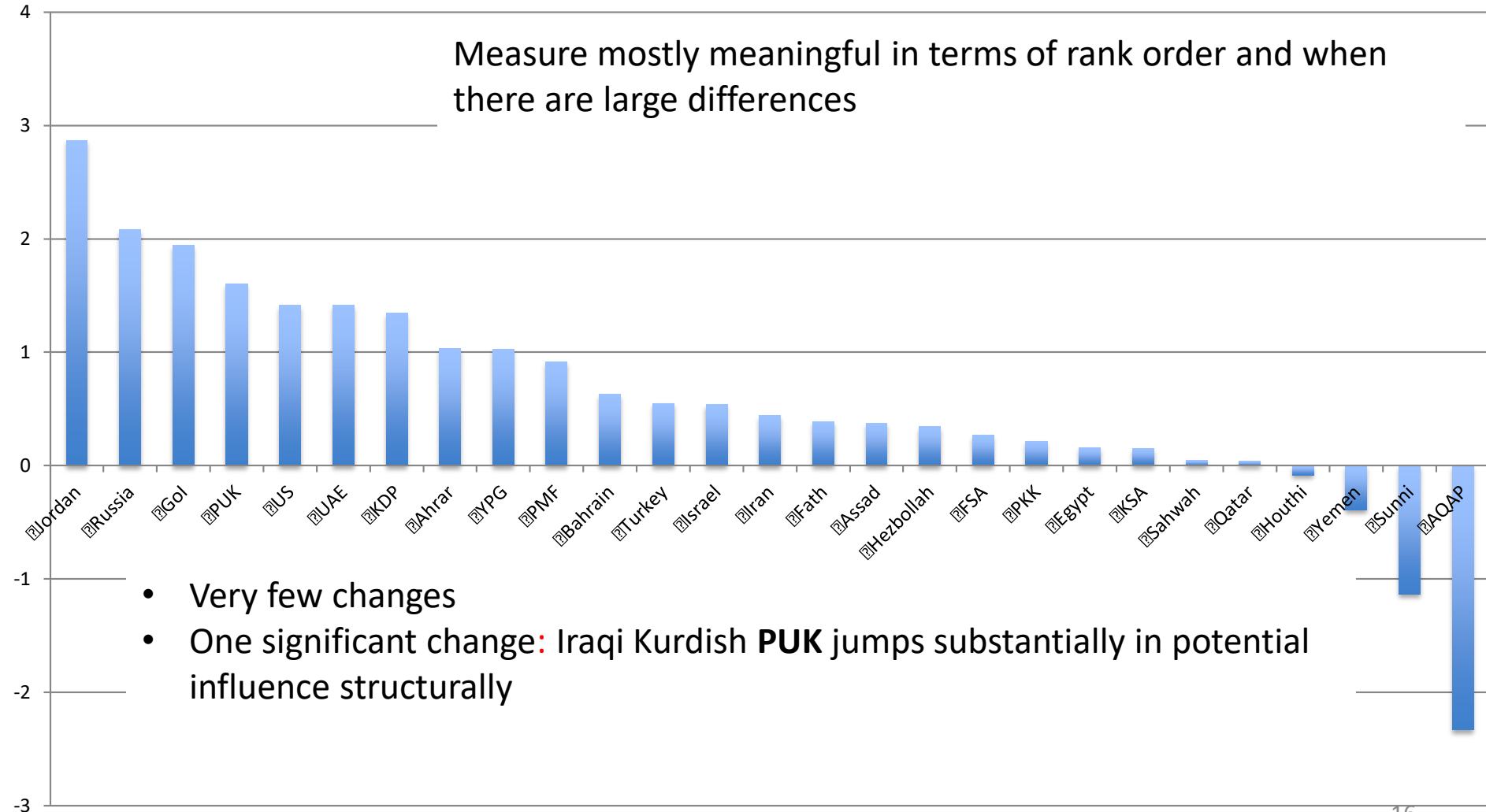
## Oct 2017 PII



- **Jordan** emerges as the actor with the most **potential influence** on the regional network
- **Russia** is potentially **more structurally influential than U.S.**
- Some regional actors in a position to have only **modest influence**: **KSA, Iran, Assad**
- **Regional jihadists** in a position to have **negligible influence** on the larger system, beyond disruption and spoiling

## PII

Measure mostly meaningful in terms of rank order and when there are large differences



- Very few changes
- One significant change: Iraqi Kurdish **PUK** jumps substantially in potential influence structurally



- Mostly no change
- Iran loses influence
- KSA reduces EEF triads
- Iraqi Sunni extremely ambiguous and no FFF

Actor	Scenario	PII	% Null Triads	% Transitive Triads	% Intransitive Triads	Ratio of EEF/FFF Triads
US	Oct 2017	1.7	69.7%	19.5%	18.8%	26
	No Da'esh	1.4	74.0%	18.6%	14.6%	20.7
Russia	Oct 2017	2.4	67.7%	21.8%	19.2%	6.1
	No Da'esh	2.1	69.6%	23.5%	15.7%	6.3
Iran	Oct 2017	1.0	66.6%	21.0%	20.6%	7.6
	No Da'esh	0.4	71.4%	20.4%	15.0%	6.3
KSA	Oct 2017	0.2	67.4%	23.6%	16.9%	45
	No Da'esh	0.2	71.4%	25.4%	11.4%	11.7
Iraqi Sunni	Oct 2017	-0.5	97.4%	0.0%	2.6%	no FFF
	No Da'esh	-1.1	100.0%	0.0%	0.0%	no FFF

- **Two Main Spheres Emerge** – 1) Shia and 2) US and Sunni States
  - True for a variety of interests (security, prestige, economic, identity and domestic), although the precise arrangement of these spheres looks different for each of these interests
  - **Da'esh** and other regional jihadist **role in regional dynamics is marginal** for all interest types suggesting that it is limited to playing the role of spoiler through terrorist attacks
- **Jordan** emerges as the regions potentially most influential actor, given its position in the network.
  - **Jordan actually has more actors seeking connection than Jordan reaches out**
- **Russia** does not have nearly the **economic connections** to the region that the US does, but has positioned itself to receive more influence from their connections than the U.S. In **security relations**, Russia is now in a **position in the network to have more influence than the U.S.**
- **Iran** is well-connected to the region economically but marginalized in terms of connections based on its security, identity and domestic connections, it does not wield the influence many assume. Furthermore, **in a world without Da'esh Iran loses potential to influence** the system.
- **Sunni tribes** in Iraq are in an entirely ambiguous position in the network
- **A post-Daesh world** eliminates Da'esh violence, but may actually set the region up for a broader conflict with unexpected alliances that cross-cut ethno-religious identities



Back up.

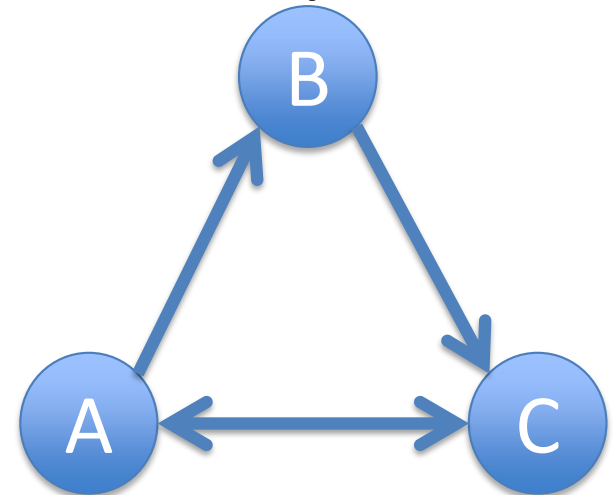


# Isomorphic Triad Classes

Triad Class	MAN Nomenclature	Edges	Description	UCINET Transitive	Wasserman & Faust
1	003	A,B,C	The empty subgraph		
2	012	A->B, C	Subgraph with a single directed edge		
3	102	A<->B, C	Subgraph with a mutual connection between two vertices		
4	021D	A<-B->C	Out-star		
5	021U	A->B<-C	In-star		
6	021C	A->B->C	Directed line	N	
7	111D	A<->B<-C		N	
8	111U	A<->B->C		N	
9	030T	A->B<-C, A->C		Y	1 transitive triple
10	030C	A<-B<-C, A->C		N	
11	201	A<->B<->C		N	
12	120D	A<-B->C, A<->C		Y	2 transitive triples
13	120U	A->B<-C, A<->C		Y	2 transitive triples
14	120C	A->B->C, A<->C		N	1 transitive triple, 2 intransitive triples
15	210	A->B<->C, A<->C		N	3 transitive triples, 1 intransitive triple
16	300	A<->B<->C, A<->C	Complete subgraph	Y	6 transitive triples

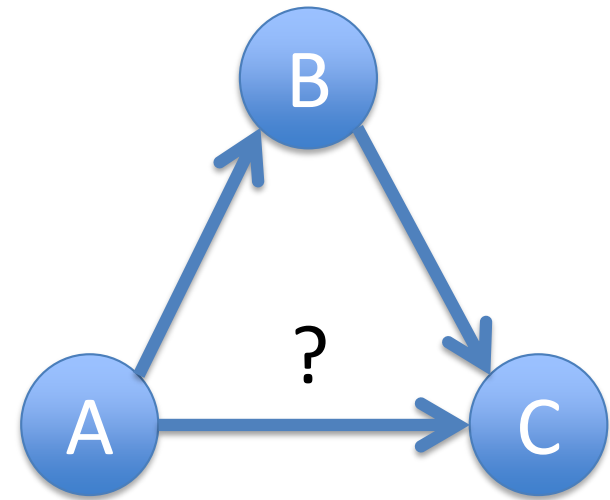
# Triads vs. Triples

- **Triad** – any three nodes
- **Triple** – the directed relations between the nodes
- A single triad can have multiple triples
- Example – This triad 120C contains 4 triples
  - A→C, A→B, B→C, intransitive
  - A→B, B→C, A→C, transitive
  - B→C, C→A, A→B, intransitive
  - C→A, A→B, B→C, intransitive



# Transitivity Explained

- It's all about order
- Simple multiplication of +'s and -'s won't do
- One must ask the ordered questions:
  1. If A chooses B, and
  2. B chooses C
  3. Does A choose C?
  4. If Y, then transitive, N then intransitive



# Transitivity Explained

- While standard analyses do not use signed graphs, these questions can be generalized to them
- Blue = +; Red = -
- There are just three more outcomes to consider
  - Enemy of my Friend is my Enemy
    - If A Chooses B, and
    - B Does Not choose C
    - A should Not Choose C
  - Enemy of my Enemy is my Friend
    - If A Does Not Choose B
    - B Does Not Choose C
    - A should Choose C
  - Friend of my Enemy is my Enemy
    - If A Does Not Choose B
    - B Chooses C
    - A should Not Choose C

