Try To See It My Way

Persuasion in Legal Discourse

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We Can Work It Out

Law Is Based On Disagreement

- A disagreement about a *decision*
  - Although the disagreement *may* be rooted in divergent beliefs, this in not always the case
- The parties attempt to ***persuade*** the judge to see it their way
- Judges attempt to ***persuade*** the world to see it their way

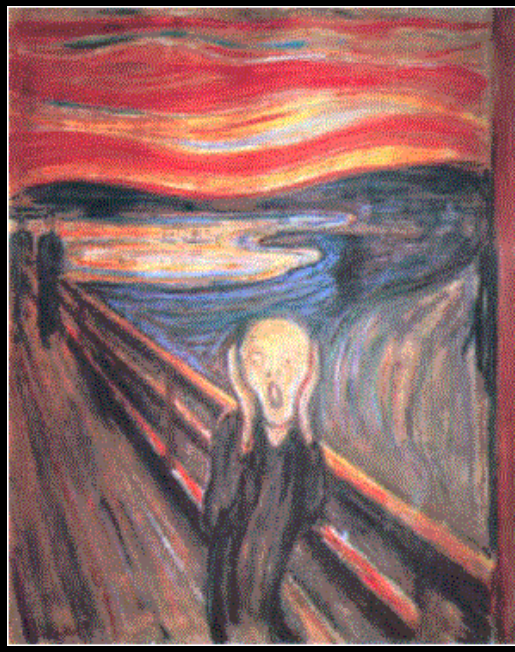
Why Do People Disagree?

- Through ignorance
  - They may lack a crucial piece of information
- Through weakness
  - They may not be *able* to draw a conclusion
- Through deliberate fault
  - They may refuse to draw a conclusion

Easy to reconcile, through education, through training, through goodwill. Proof is possible here.

But Sometimes Disagreement is Rational

- Both parties agree on
  - Facts
  - Logic
  - Validity of Arguments
  - Which arguments attack each other
  - Rules of fair debate



- *But still disagree as to which arguments **should** be accepted*

Taxation Debate

Raise taxes to promote equality

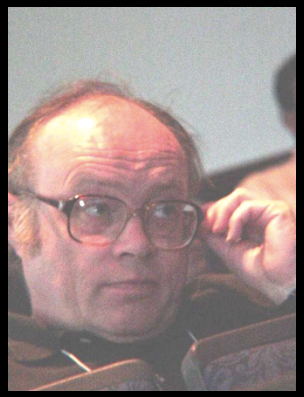
Lower taxes to promote enterprise

Brown sees force in both arguments
– but what Brown does depends on (reveals?) whether Brown prefers equality or enterprise at a given time

Values Have Different Weights for Different People

- We may both accept that both equal distribution AND enterprise are good,
- BUT I might sacrifice enterprise to equality and you might sacrifice equality to enterprise
- So we can agree that both arguments are valid, but disagree as to what should be done
- The strength of an argument (for an audience) depends on the strength that audience gives to the value accepting it promotes

Education Debate



Universities need More money to maintain standards

More money would Require taxes To rise

Irreconcilable difference in values: educational standards versus whatever is served by inadequate taxation

As Perelman says:

- If men oppose each other *concerning a decision to be taken*, it is not because they commit some error of logic or calculation. They discuss apropos the applicable rule, the ends to be considered, the meaning to be given to values, the interpretation and characterisation of facts.

Perelman Again

- "Arguments which justify our opinions, choices and decisions are never as compelling as demonstrative proofs: they are more or less strong, relevant or convincing. A demonstration is correct or incorrect, it is imposed absolutely or lacks value; but in argumentation it is always possible to plead for or against, because arguments which support one thesis do not entirely exclude the opposite one; *this in no way means that all arguments are of the same value*"

Perelman Once More

- "Logic underwent a brilliant development during the last century when, abandoning the old formulas, it set out to analyze the methods of proof used effectively by mathematicians. … One result of this development is to limit its domain, since everything ignored by mathematicians is foreign to it. Logicians owe it to themselves to complete the theory of demonstration obtained in this way by a theory of argumentation"

The Audience is Crucial

- Whether an argument is preferred may depend on the audience as much as the argument itself
- Arguments may derive their force by the values they promote, and audiences may differ in how they prize those values

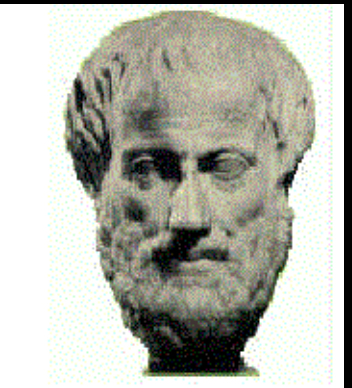
Form of an Argument for Practical Reasoning

1) In these circumstances
2) You should φ
3) Because performing φ advances some good G in these circumstances
   - Income tax should be increased because this would lead to a more equitable distribution
   - Income tax should be decreased because this would promote enterprise

We can analyse (3) further but there is no need to do so in this context

A Practical Argument

- Must be sound
  - The action must promote the good in the circumstances
- Must promote an accepted value
  - Otherwise it cannot persuade
  - The action is desirable only if it promotes what is considered good



Different audiences may accept different arguments if they subscribe to different values

Approach

- Start from Dung's Argumentation Framework
  - Abstract enough to avoid questions of what counts as an argument or attack
- Extend this to include notions of value and audience
  - Value Based Argumentation Framewoks

Dung's Argument Framework

- Introduced in AIJ 1995
- Arguments at their most abstract
  - Only: which other arguments does an argument attack?
- Attacks always succeed
  - We cannot accept an argument and its attacker

Definitions

An *argumentation framework* is a pair

AF = <AR, attacks>

- Where *AR* is a set of arguments and *attacks* is a binary relation on AR, i.e. *attacks* $\subseteq$ *AR* $\times$ *AR*.

An argument $A \in AR$ is *acceptable* with respect to set of arguments S if:

$(\forall x)((x \in AR) \,\&\, (attacks(x,A)) \rightarrow (\exists y)(y \in S) \,\&\, attacks(y,x))$.

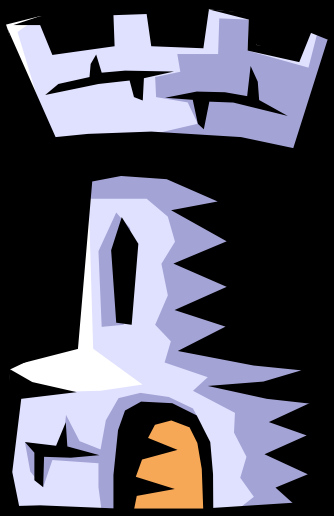
A set S of arguments is *conflict-free* if

$\neg(\exists x)(\exists y)(x \in S) \,\&\, (y \in S) \,\&\, attacks(x,y)$.

A conflict-free set of arguments *S* is *admissible* if

$(\forall x)((x \in S) \rightarrow acceptable(x,S))$.

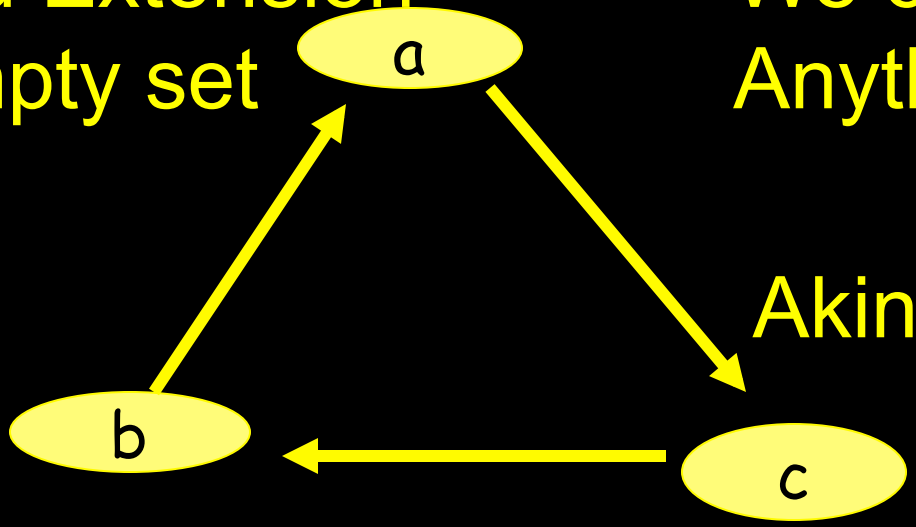
Preferred Extension



- *A* set of arguments *S* in an argumentation framework *AF* is a *preferred extension* if it is a maximal (with respect to set inclusion) admissible set of *AR*.
- Preferred Extensions are interesting because they represent maximal coherent positions, able to defend themselves against all attackers
- *BUT: there may be multiple preferred extensions, and no way to choose between them*

Odd Cycle

Preferred Extension is the empty set



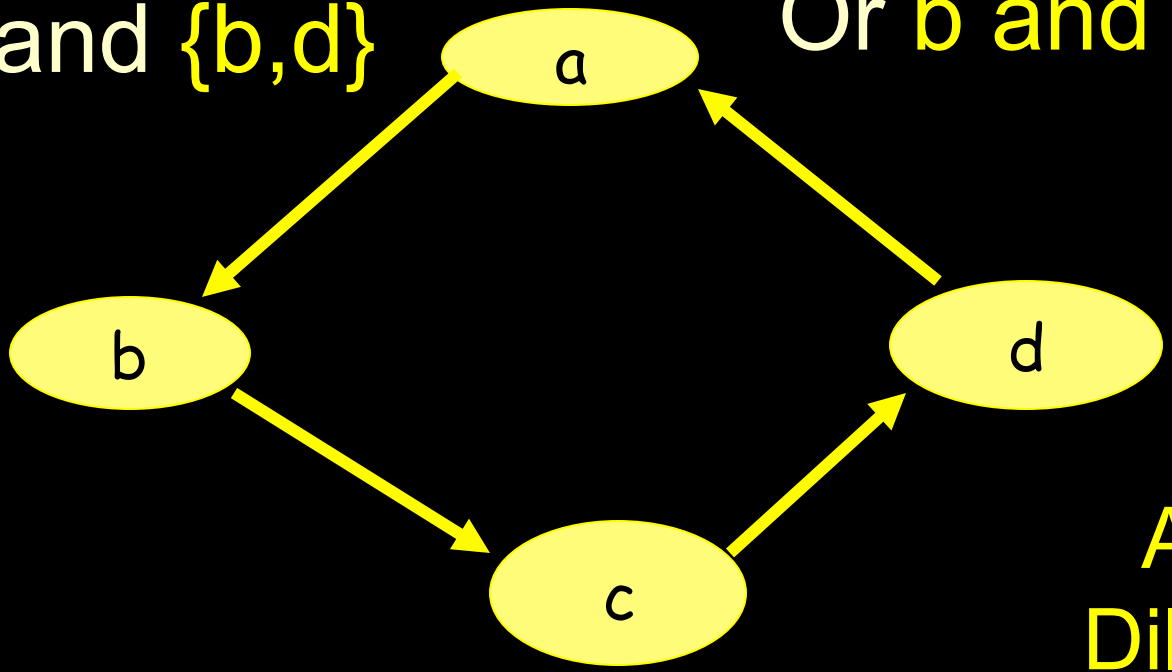
We can't accept Anything here

Akin to Paradoxes

Even Cycle

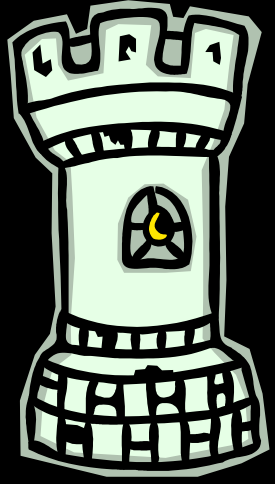
Two
Preferred Extensions
{a,c} and {b,d}

We can accept
Either a and c
Or b and d



Akin to
Dilemmas

In general



- Every AF has a preferred extension
  - Which may be the empty set
- AFs do not have a unique preferred extension
  - Even cycles give rise to choices
- An argument may be in every preferred extension (sceptically acceptable)
- An argument may be in some preferred extensions (credulously acceptable)
- An argument may be in no preferred extension (indefensible)

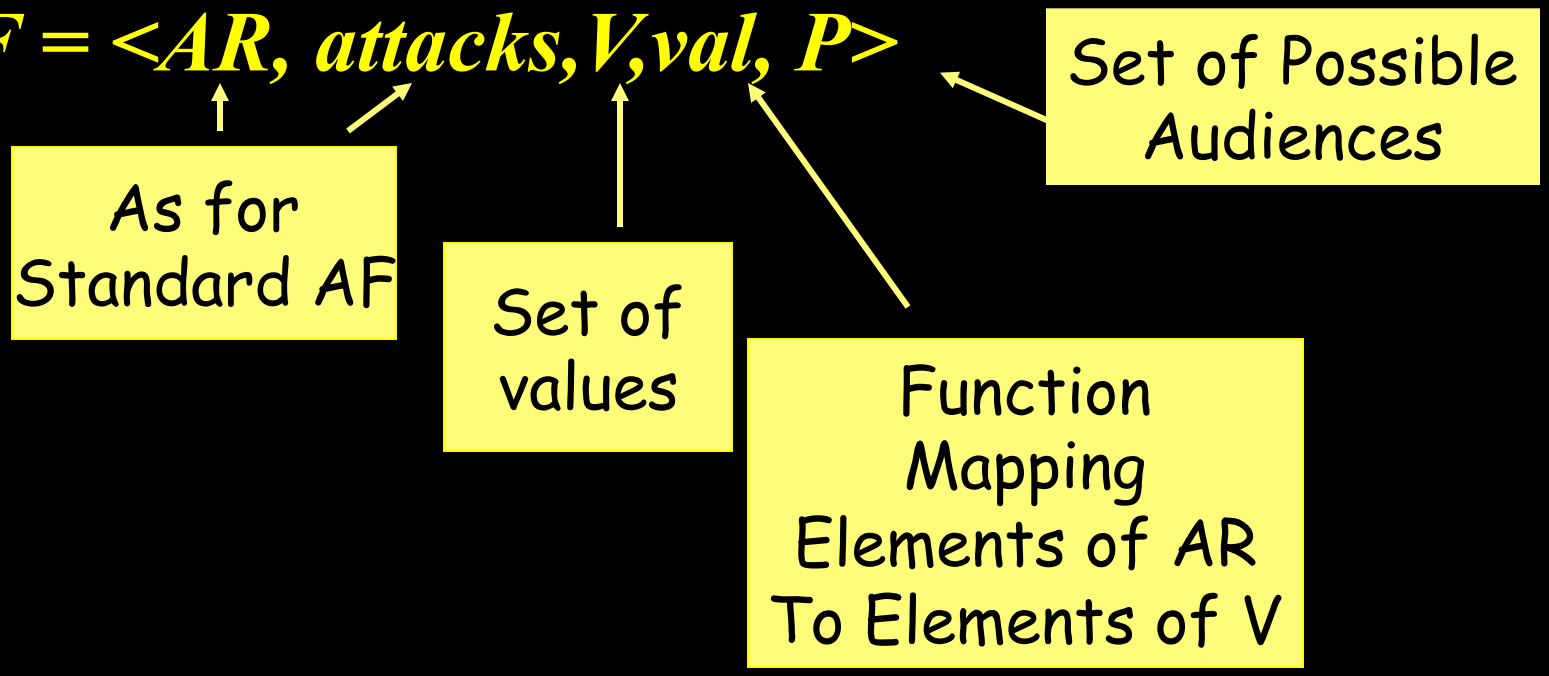
To allow for rational disagreement

- We must distinguish attack from defeat
- We can accept arguments which are attacked, AND their attackers, provided the attacks fail
- Dung's framework is too abstract to allow such talk – we need to be able to discuss value as well as conflict

Value-based Argumentation Framework

A value-based argumentation framework (VAF) is a 5-tuple:

$VAF = \langle AR, attacks, V, val, P \rangle$

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Audience Specific VAF

An audience specific *VAF* (*AVAF*) is a 5-tuple:

$$AVAF = \langle AR, attacks, V, val, Valpref_a \rangle$$

As for Standard AF

Set of values

Function Mapping Elements of AR To Elements of V

$Valpref_a$ is the value preferences of audience a

Defeat in AVAF

An argument A ∈ AF defeats$_a$ an argument B ∈ AF for audience a if and only if both attacks(A,B) and not valpref$_a$(val(B),val(A)).

Note: An argument is defeated by an attacker with the same value

Defeat is always *relative to an audience*

If there is only one value in V we have a standard argumentation framework

Definitions for AVAF

- An argument $A \in AR$ is *acceptable* to audience a with respect to set of arguments S, if:

$(\forall x)((x \in AR \ \& \ defeats_a(x,A)) \rightarrow (\exists y)((y \in S) \ \& \ defeats_a(y,x)))$.

- A set S of arguments is *conflict-free* for audience a if

$(\forall x)\ (\forall y)((\ x \in S \ \& \ y \in S) \rightarrow$

$(\neg attacks(x,y) \vee valpref(val(y),val(x) \in valpref_a)))$.

- A conflict-free set of arguments S is *admissible* for audience a if

$(\forall x)(x \in S \rightarrow acceptable_a(x,S))$.

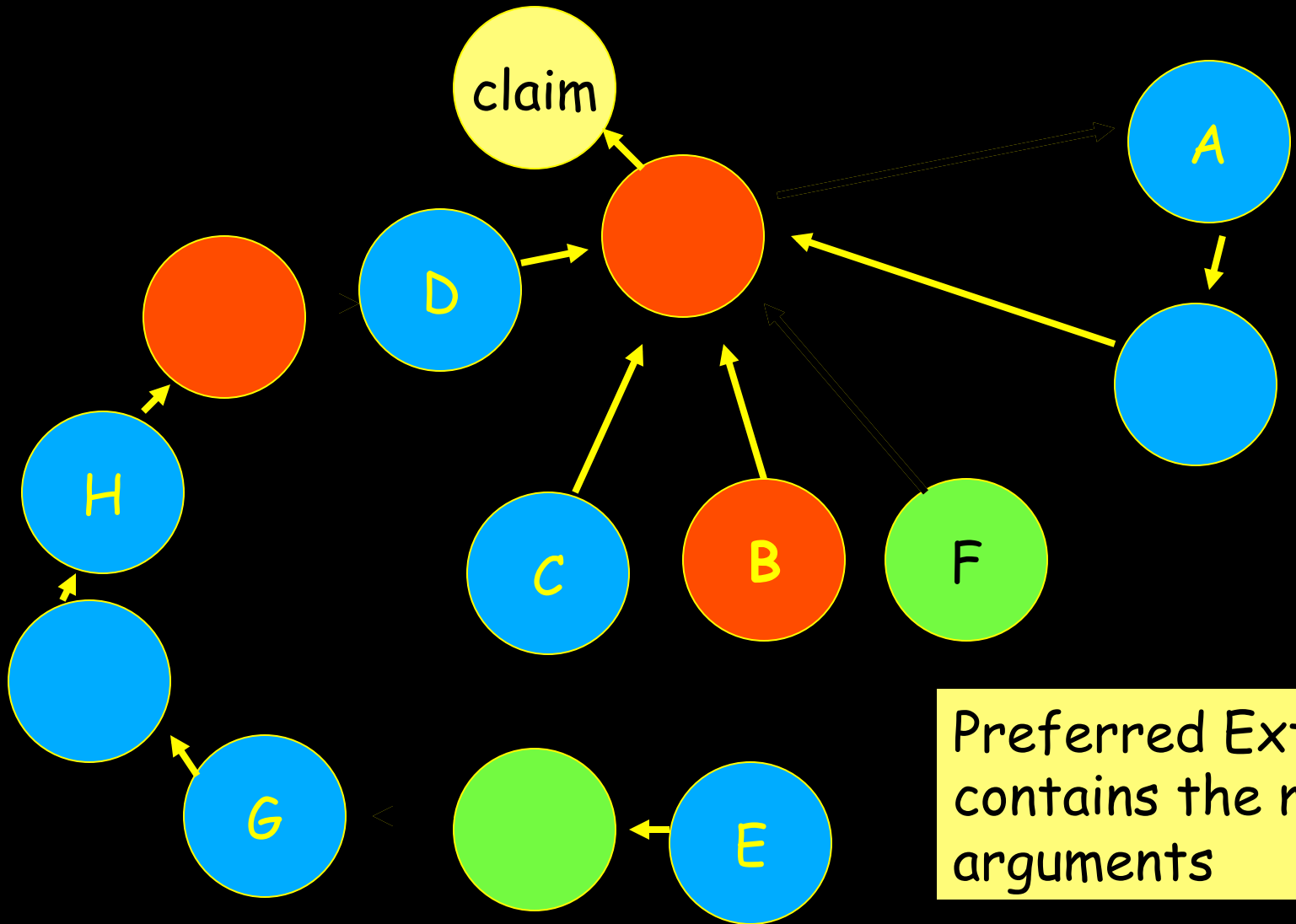
Preferred Extension of an AVAF

- *A set of arguments S in an value-based argumentation framework is a preferred extension for audience a if it is a maximal (with respect to set inclusion) admissible for audience a set of AR.*

Relation between AVAF and AF

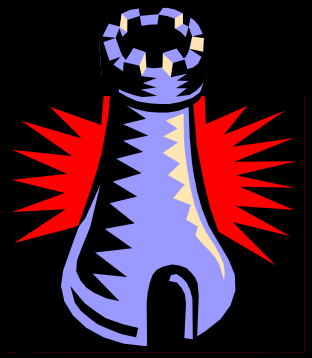
- Given an AVAF, vaf_a <AR,attacks,V,val, $Valpref_a$> there is an AF, af_a <AR, defeats> such that an element of attacks, attacks(x,y) is an element of defeats if and only if $defeats_a(x,y)$
- The preferred extension of af_a will be the same as the preferred for audience a extension of AVAF
- If vaf_a doesn't contain single valued cycles, neither will af_a, and hence both will have a unique non-empty preferred extension.

AF for audience with B > R > G



Preferred Extension contains the marked arguments

Values and Preferred Extensions



Given an order on values,

A value based argumentation framework with no single valued cycles,

Has a unique, non-empty preferred extension

Any dispute can be resolved by ordering the values

Objective Acceptance

- An argument is objectively acceptable if it is in the preferred extension for every audience
- An argument if subjectively acceptable if it is in the preferred extension for some audience
- An argument is indefensible if it is no preferred extension of any audience

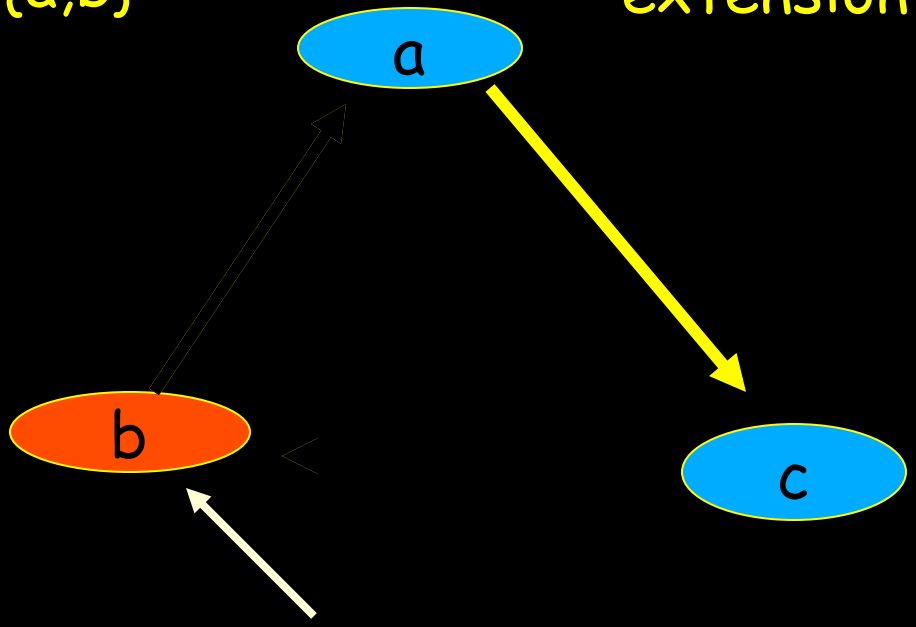
Values Break Cycles

- If a cycle contains at least two values, at some point an attack will fail
- This means that such VAFs have a unique, non-empty preferred extension
- Moreover, in many cases, there will objectively acceptable arguments

Two Valued Odd Cycle

If blue > red, preferred extension is {a,b}

If red > blue, preferred extension is {b,c}

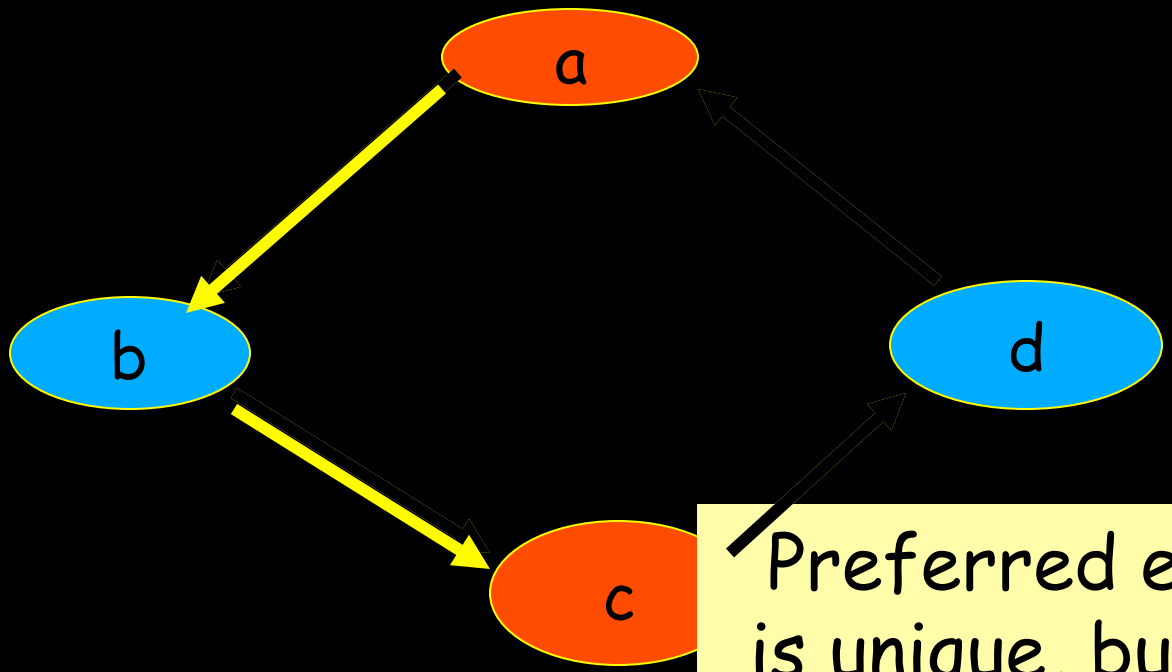


Note: b is in the preferred extension *whatever* the value order

Two Valued Even Cycle Alternating Colours

If blue > red, preferred extension is {b,d}

If red > blue, preferred extension is {a,c}

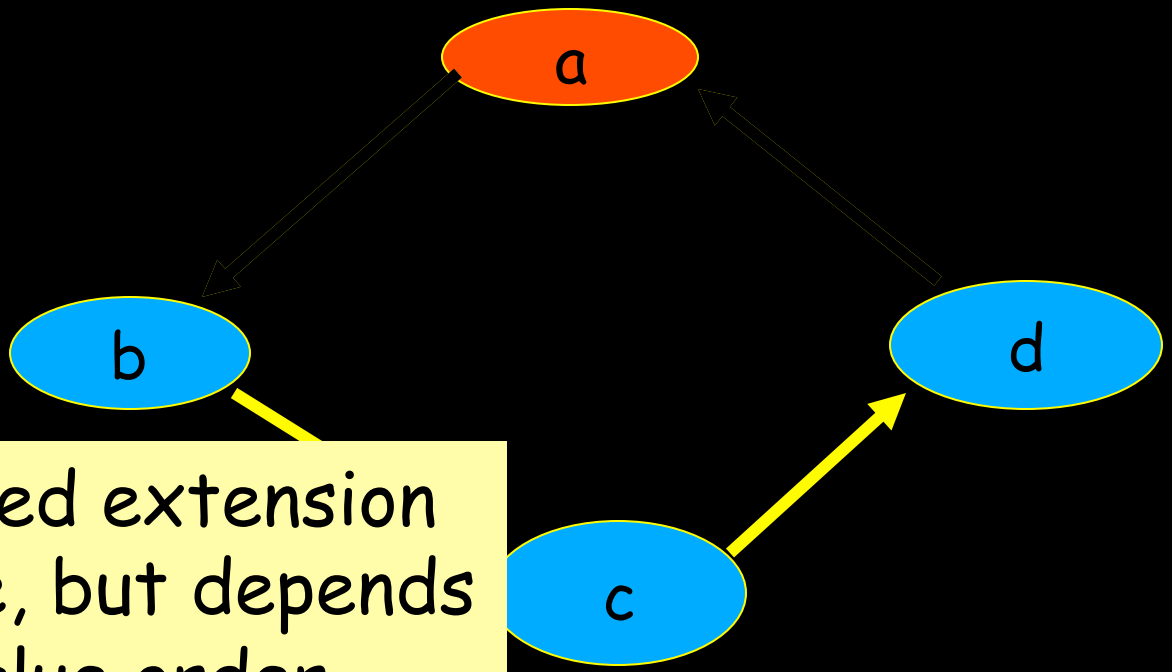


Preferred extension is unique, but depends on value order

Two Valued Even Cycle Unbalanced Colours

If blue > red, preferred extension is {b,d}

If red > blue, preferred extension is {a,c}

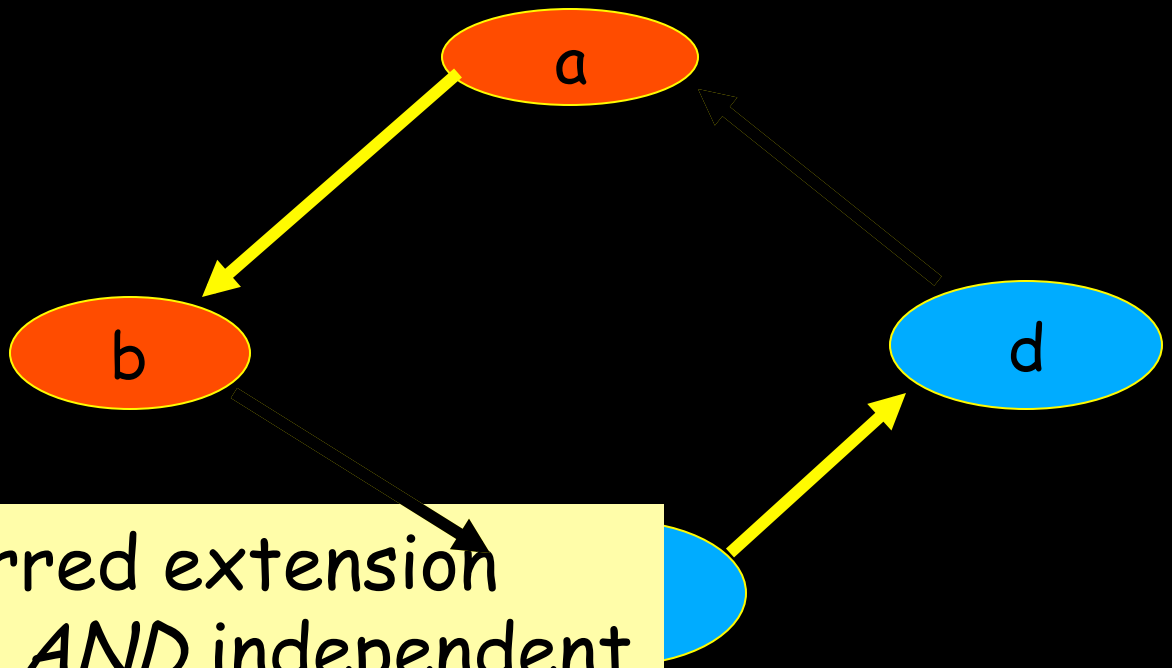


Preferred extension is unique, but depends on value order

Two Valued Even Cycle Connected Colours

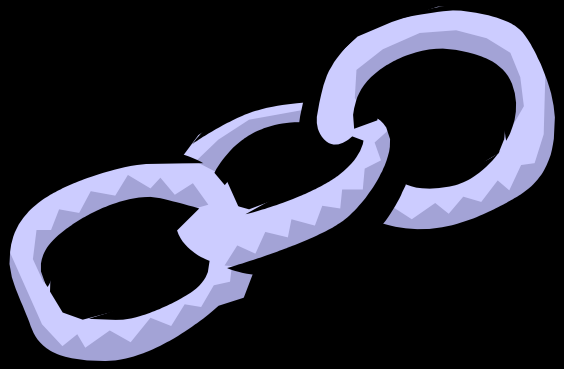
If blue > red, preferred extension is {a,c}

If red > blue, preferred extension is {a,c}

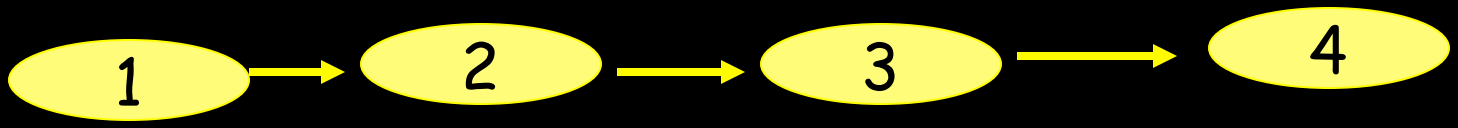


Preferred extension is unique, *AND* independent of value order

Argument Chains



- An *argument chain* in a *VAF, C,* is a set of n arguments $\{a_1 \ldots a_n\}$ such that
  - $(\forall a)\,(\forall b)(a \in C \,\&\, b \in C) \rightarrow val(a) = val(b))$;
  - a_1 has no attacker in C;
  - For all $a_i \in C$ if $i > 1$, then a_i is attacked and the sole attacker of a_i is a_{i-1} .
- If the first argument is accepted, all odd numbered arguments are accepted;
- If the first argument is rejected, all even numbered arguments are accepted

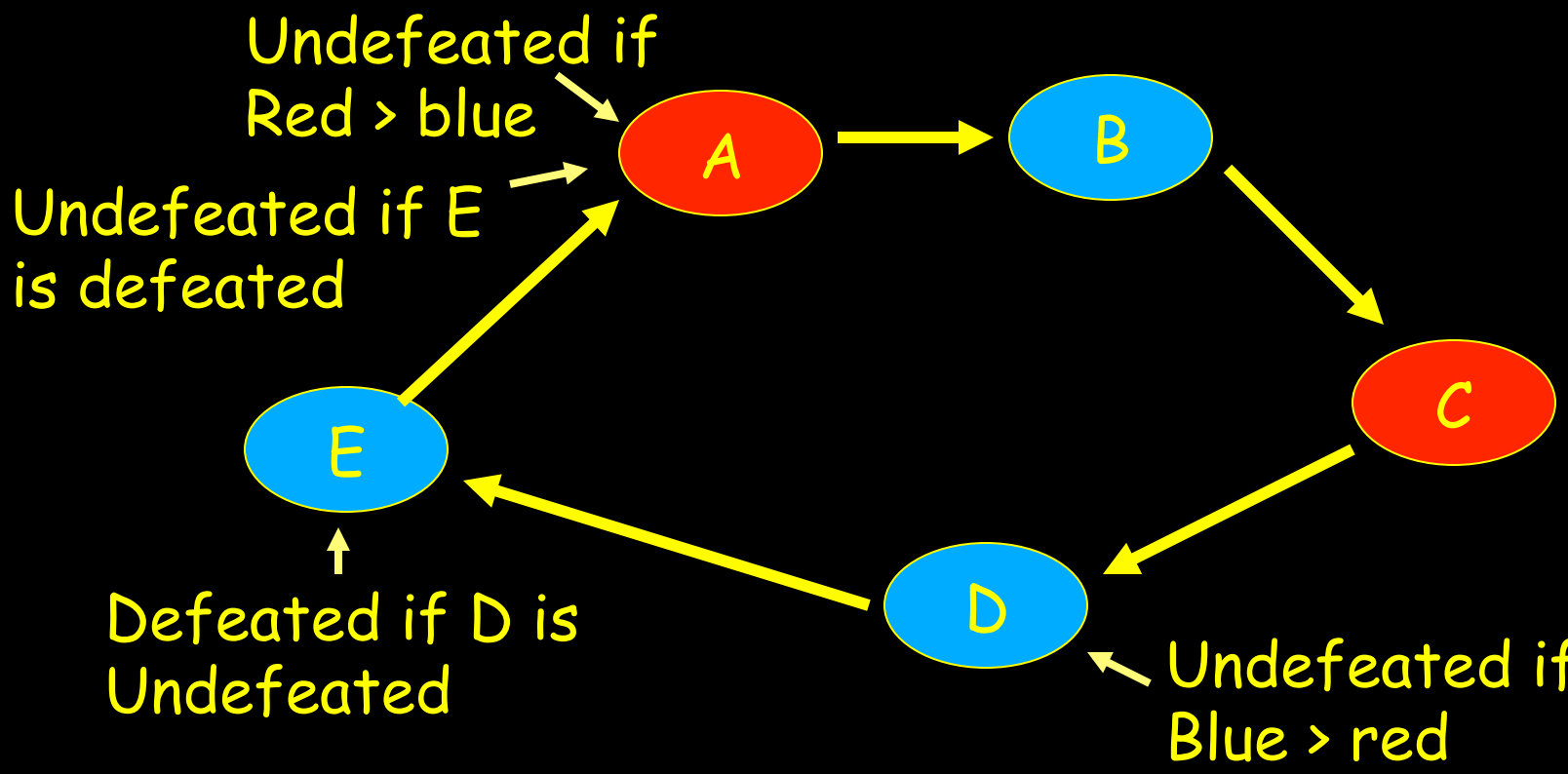


Two Valued Odd Cycles

- A two valued odd cycle comprises
  - An odd number of odd chains
  - At least one even chain
- The odd numbered arguments of any chain attacked by an even chain will be objectively acceptable
- The even numbered arguments of any chain attacked by an even chain will be indefensible

Why is A objectively acceptable?

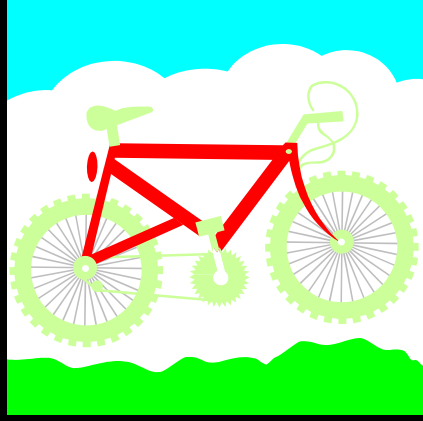
if blue > red {b,d,a}
if red > blue {a,c,e}



Two Valued Even Cycles

- A two valued even cycle comprises
  1. An even number of odd chains; *OR*
  2. Any number of even chains; *OR*
  3. An even number of odd chains and any number of even chains
- Preferred extensions are:
  1. The odd numbered arguments of the chains with the preferred value, and the even numbered arguments of the other chains
  2. The odd numbered arguments from each chain
  3. The odd numbered argument of all chains attacked by even chains + some others

Two Valued Cycles



- The preferred extension comprises
  - Odd numbered arguments of chains attacked by even chains
  - Odd numbered arguments of chains with the preferred value
  - Even numbered arguments of other chains

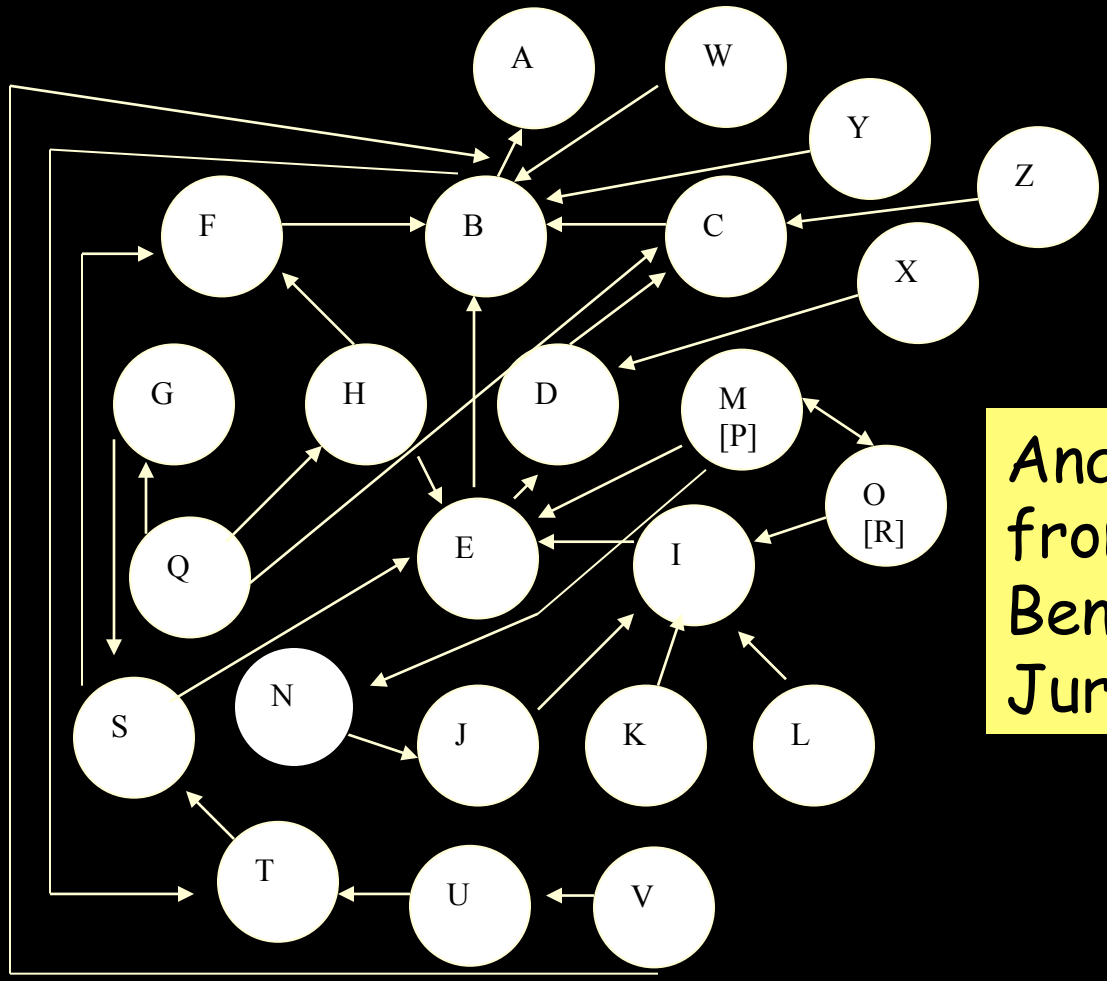
We can provide similar analyses for cycles with k-values

Example Set of Cases

- Pierson: *Plaintiff is hunting a fox on open land. Defendant kills the fox.*
- Keeble: *Plaintiff is a professional hunter. Lures ducks to his pond. Defendant scares the ducks away*

- Young: *Plaintiff is a professional fisherman. Spreads his nets. Defendant gets inside the nets and catches the fish.*

Argumentation Framework for Animals Cases



Analysis taken from Bench-Capon 2002 Jurix 2002

Blue: Need clear law

Orange: Encourage useful activity

Pierson

A: Pierson Had A Right To the Animal

B: Pierson had No possession

E: Pierson was in full pursuit

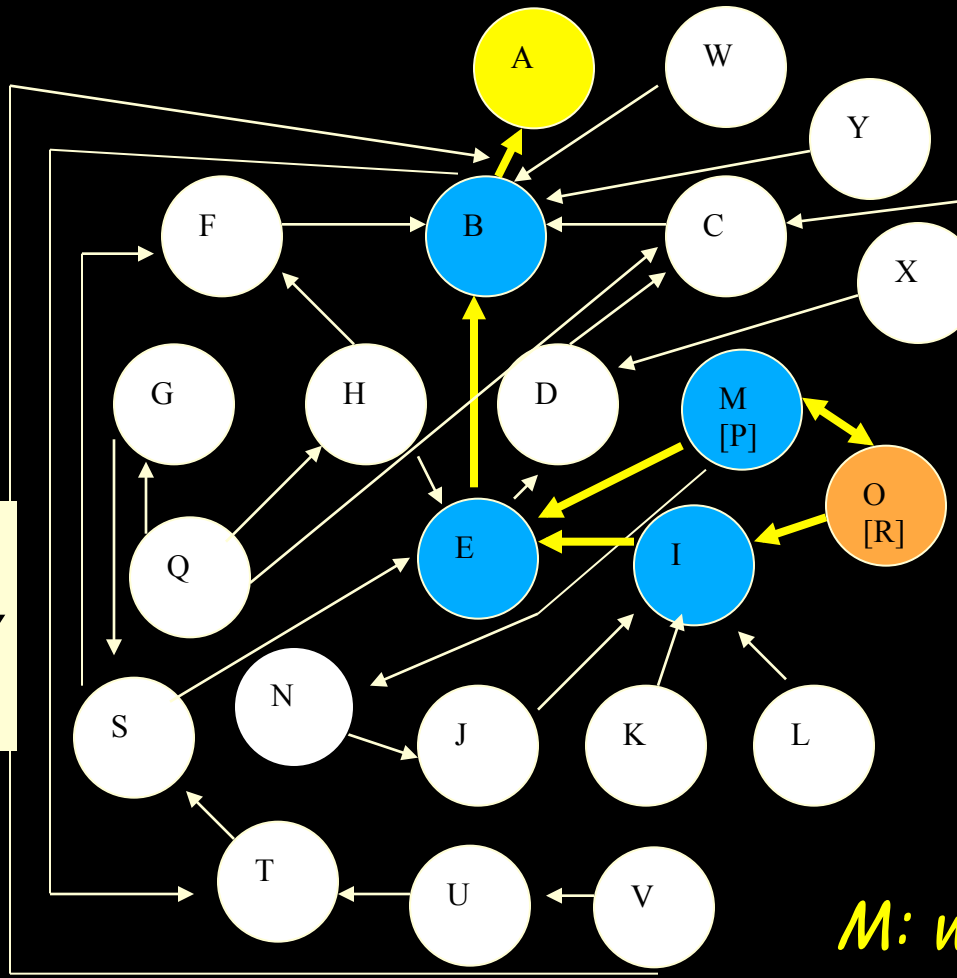
I: Pursuit not Enough

O: Seizure not necessary (we want to encourage socially useful activity)

M: we must insist on possession for clear law

M and O form a 2-cycle: resolved by Value

So A is *Subjectively* acceptable

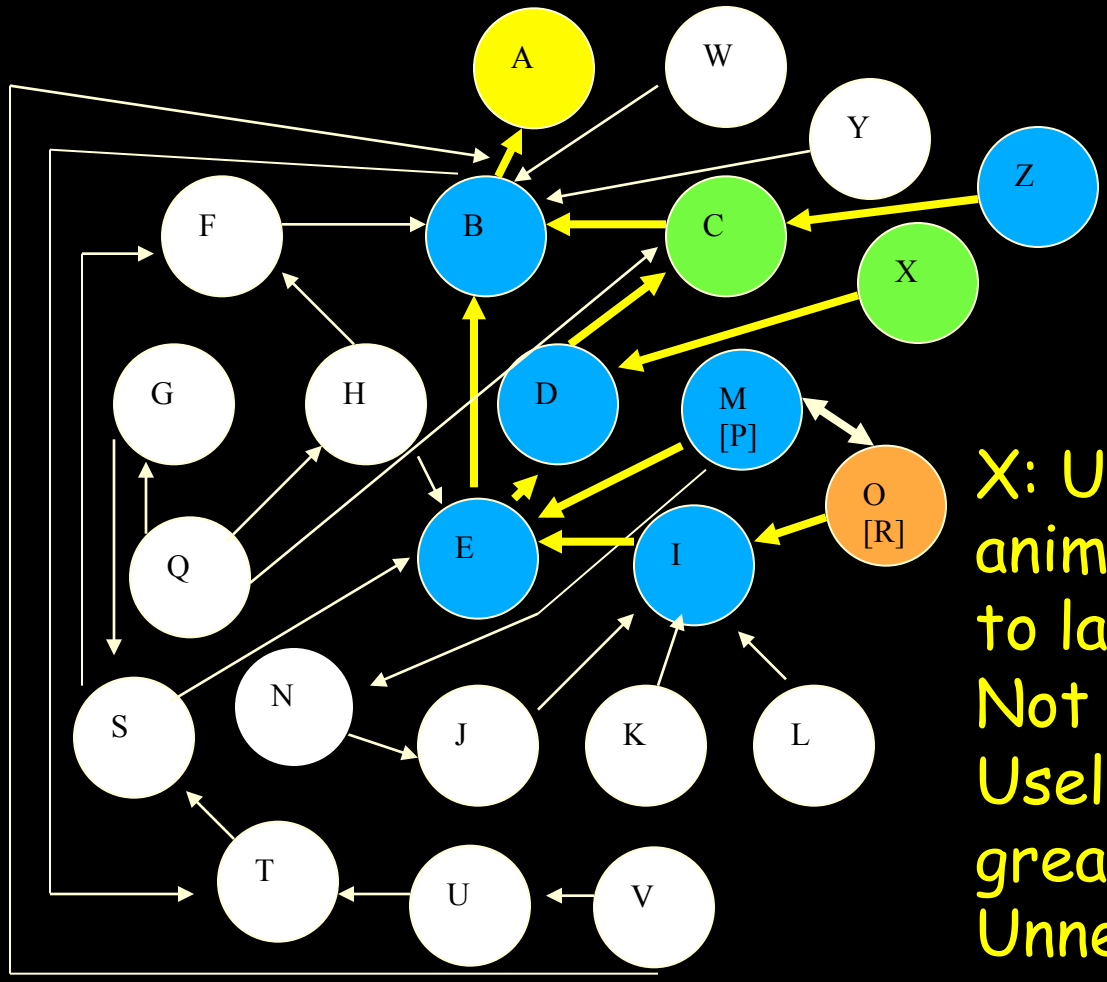


Green: Protect property rights

Keeble I

C: owns the land so possesses the animals

D: Animals not confined

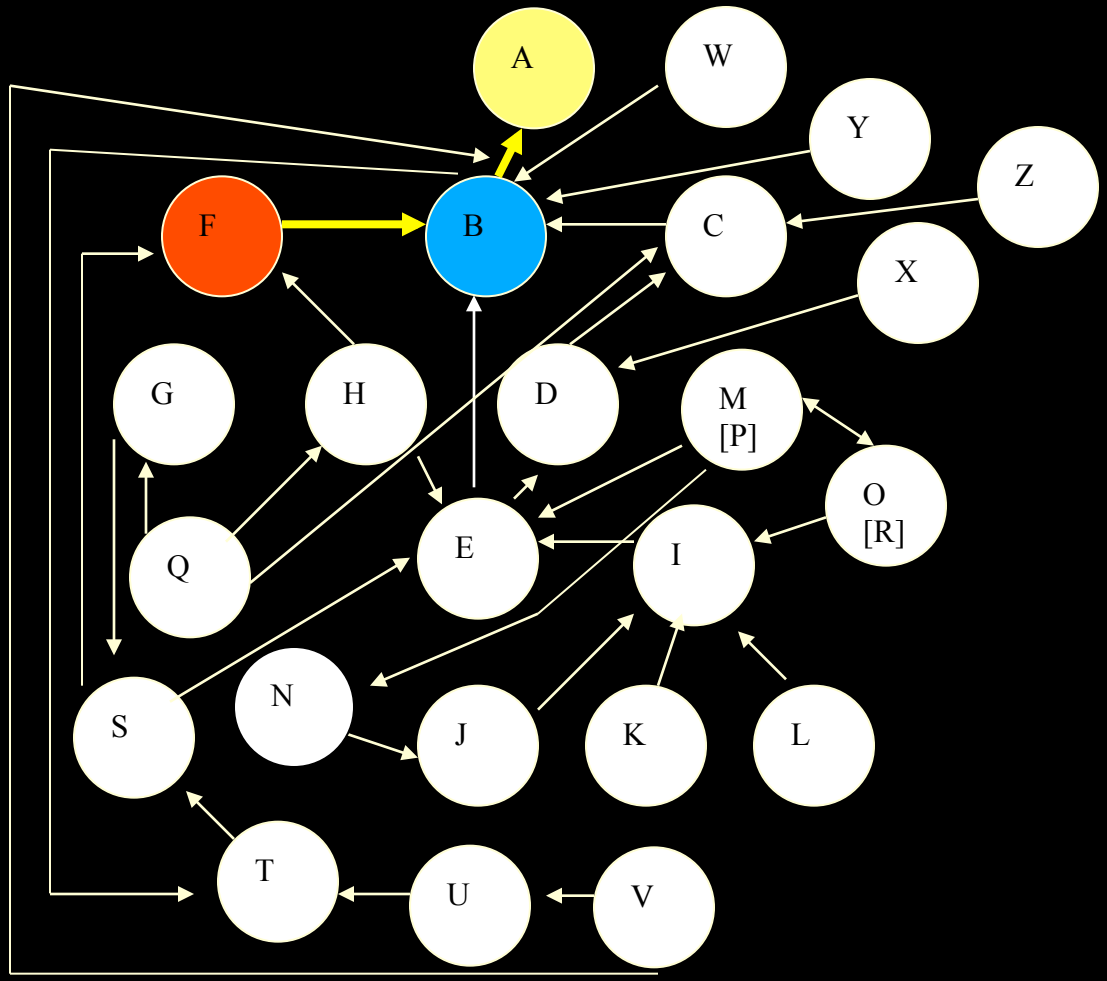


X: Unbranded animals belong to landowner. Not needed: Useless if blue greater than green Unnecessary else

Red: Promote economic activity

F: Keeble was pursuing his livelihood

Keeble II



Purple: Restrictive view of role of courts

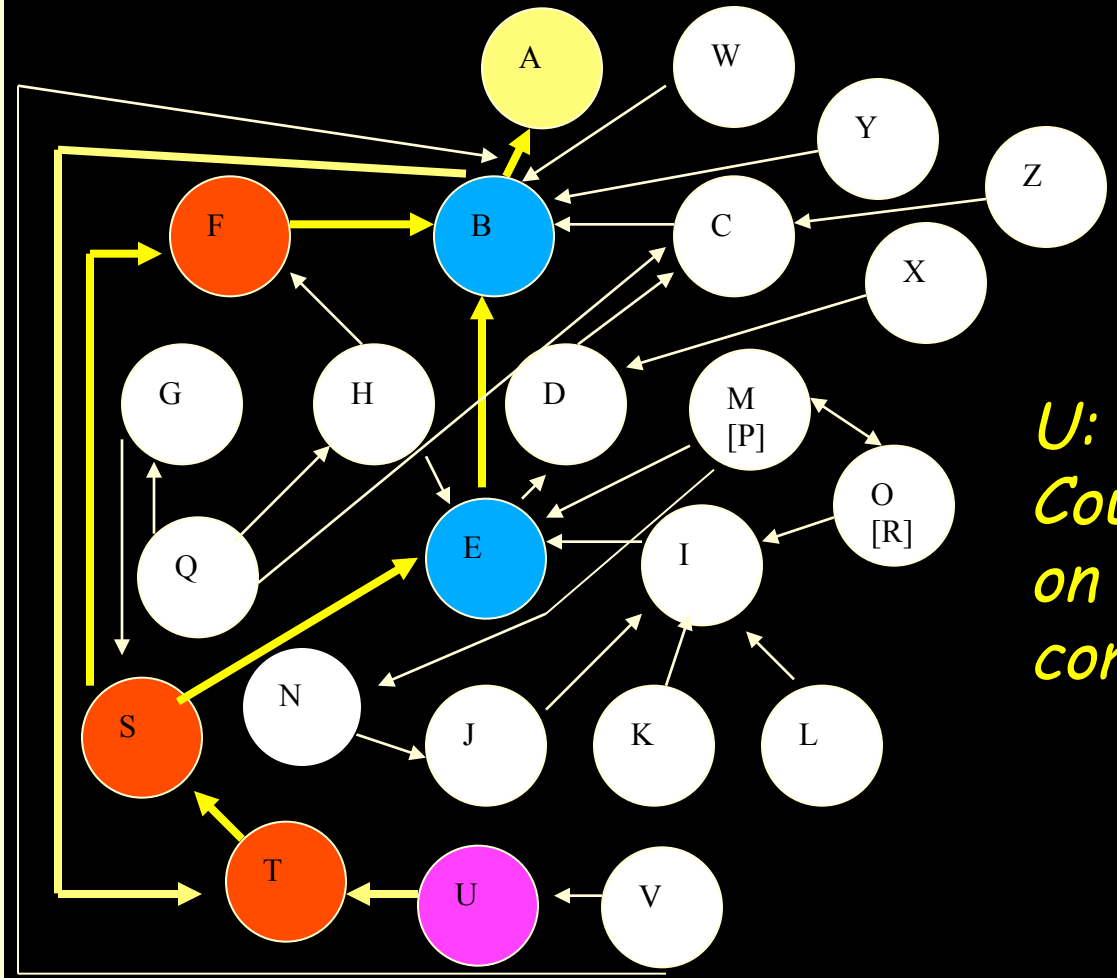
Young

S: Defendant in Competition

T: Competition was Unfair

U breaks the even cycle BTSEB

Without U B is defeated by its position in the even cycle

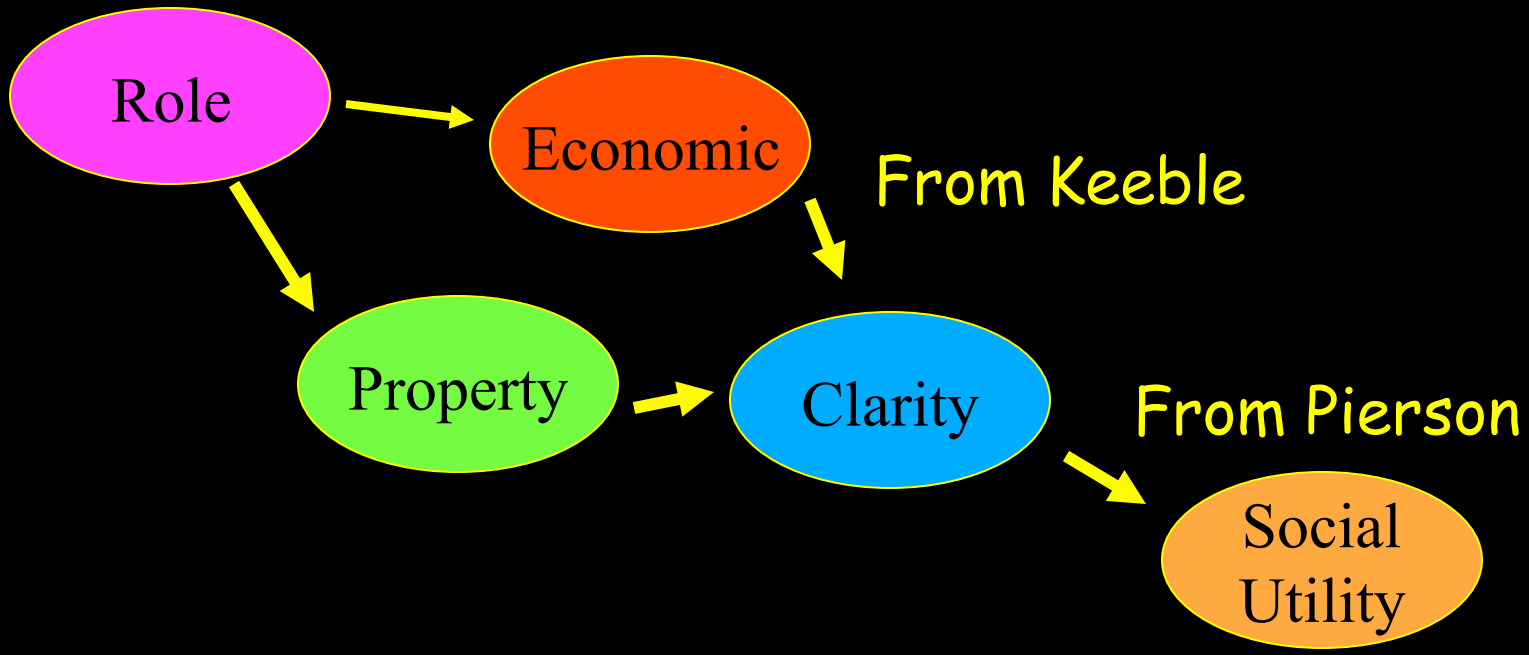


Note:
4 cycle
BTSEB
TE objectively acceptable

U: Not for the Court to rule on what is unfair competition

The Following Picture Emerges

- Partial order on values

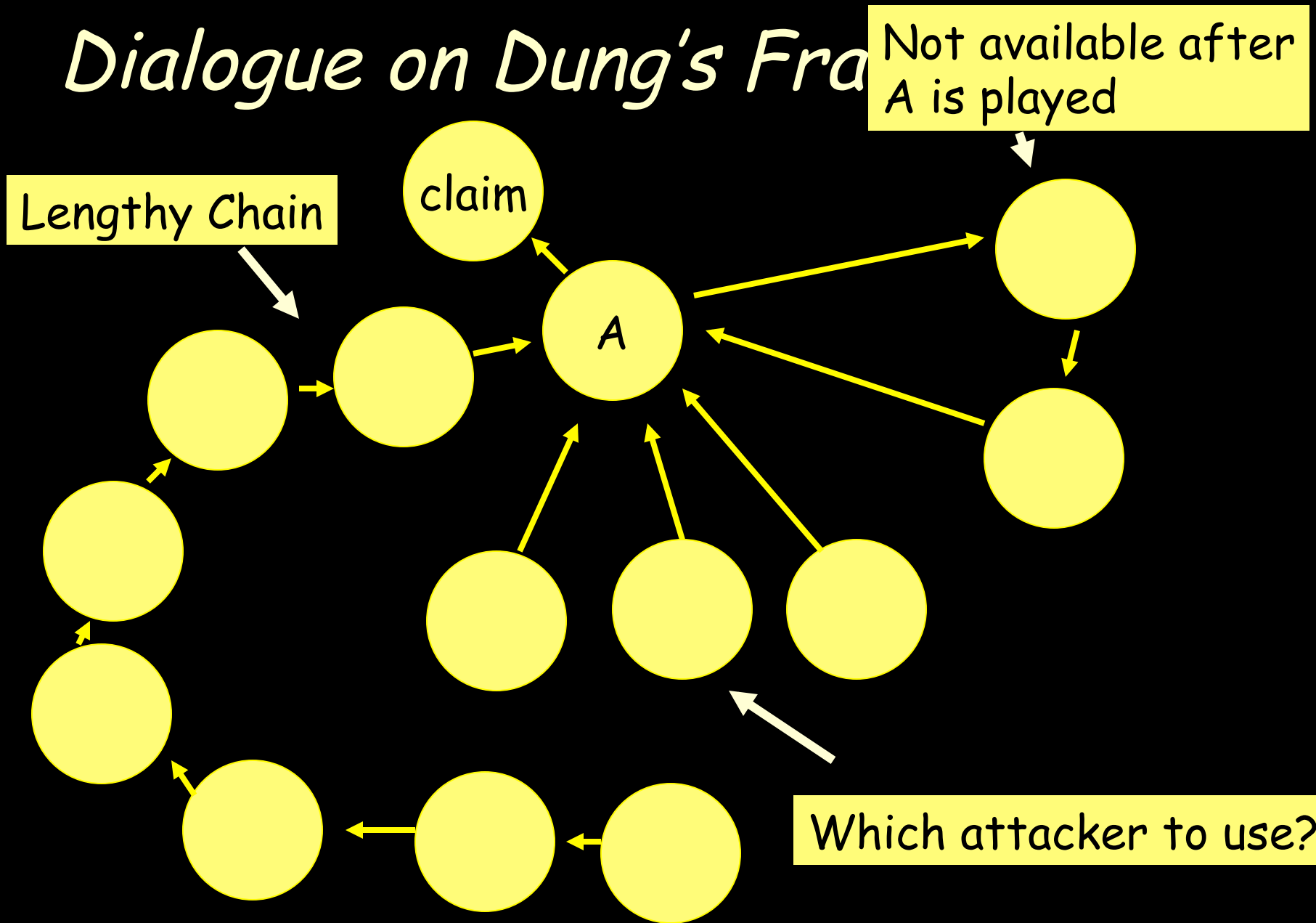


Note: this makes Young subjective: depends on view of court's role

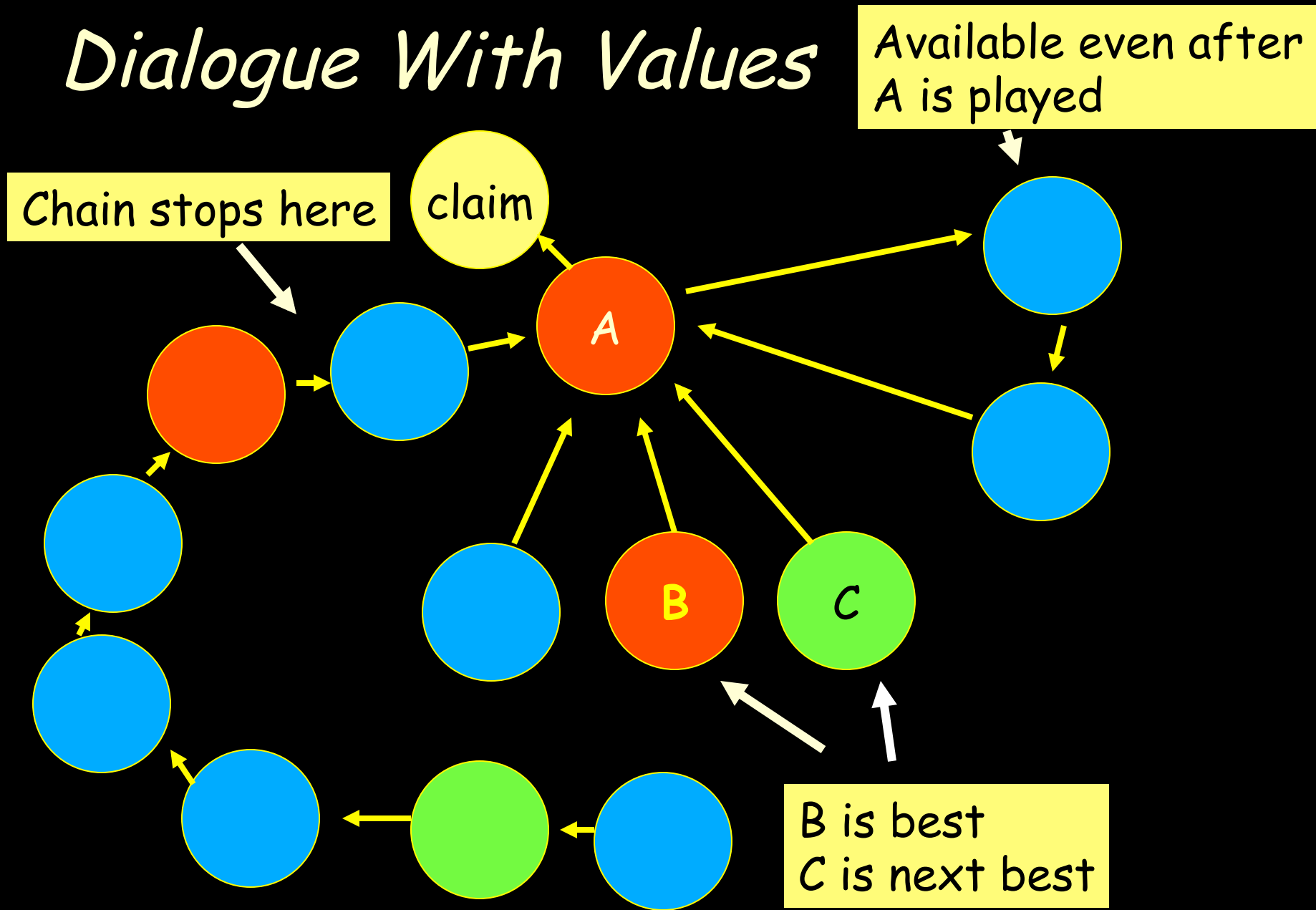
Implications for Dialogues

- Values can
  - Curtail futile lines of argument
  - Guide choice of attacking arguments
  - Make attackers available
  - Make cycles useful

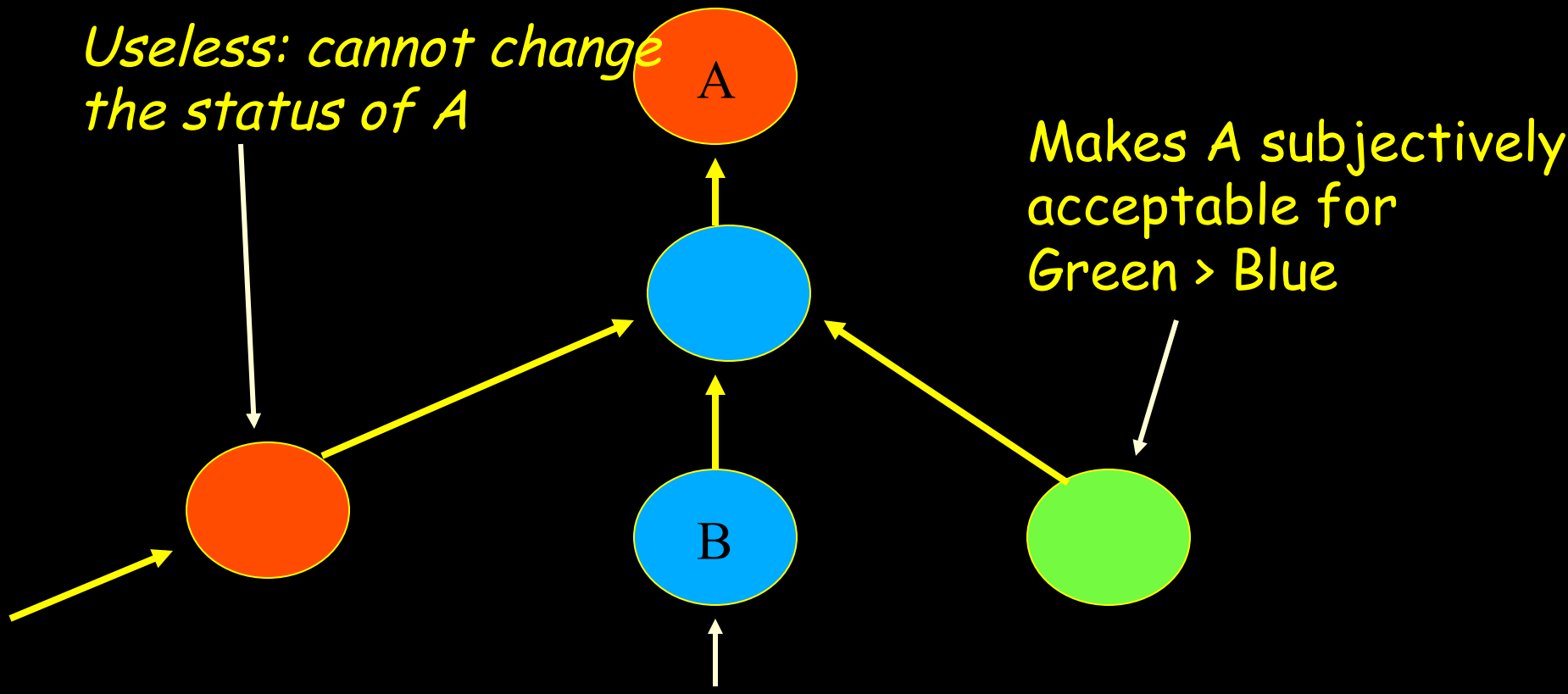
Dialogue on Dung's Fra



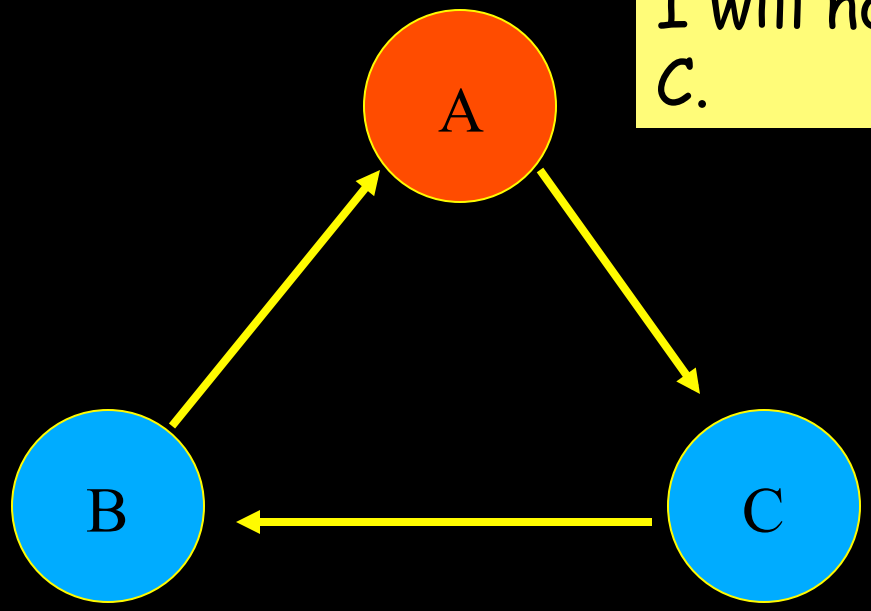
Dialogue With Values



How to defend A



It is the Preferences of the Audience That Count



If I prefer Red to Blue, I will not accept C.

But I can still use it to defeat an attack made with B

This is a significant difference from games on Dung's framework

and can establish A as objectively acceptable

Where do Value Orders Come From?

- Traditions of the legal system
- Social Factors
- Ideology

Traditions

- Narrow *versus* Broad Interpretation
- Hierarchical *versus* co-ordinate officials
- Reactive *versus* active state
- Common good *versus* Individual Goods
- Generality *versus* the Particular
- Discretion *versus* Consistency
- Rights *versus* Privileges

Social Customs

- Role of women
- Normal working week
- What items are normal:
  - Guns
  - cars

Ideology

- Left versus Right
- Secular versus Theocratic

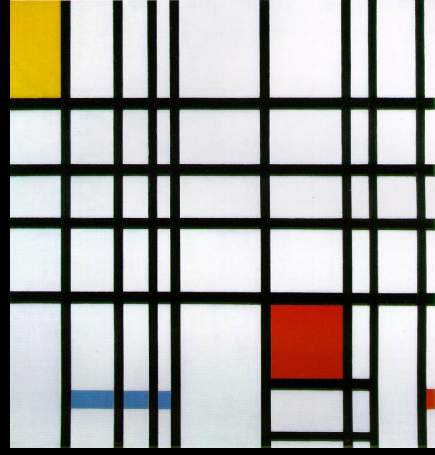
The Judge

- The judge is supposed to reflect the values currently prevailing
- This allows movement in value preferences as times change
- But usually lags behind – supporting stability and continuity
  - cf composition of Supreme Court

Values Explain

- Differences across jurisdictions
  - E.g. English law favours the particular, continental law the general
- Differences across time
  - E.g. Discretion of the judge changes
  - Social factors, such as womens' rights
- Differences between parties

Summary



- Law springs from disagreement
- Often the disagreement reflects a difference in basic values
  - Such disagreement is hard to resolve
- We can extend Dung's argumentation framework to represent values
- This can sometimes establish objective acceptability
- This can explain preferences and guide dialogue
- Value orders change, which helps to explain the evolution of case law

The Talk Is Finished