Do Case-Based Models of Legal Reasoning Fit in a Civil Law Context?

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Argument

- Civil law judges reason with precedents, but
  - in a very different way from their common law counterparts.
  - Abstract Precedent Scenario (Civil Law) vs. Fact-Based Precedent Scenario (Common Law)
- Civil law judges should more fully report case facts:
  1. Computerized full-text legal IR may work better with fuller fact descriptions
     - even if goal is to retrieve cases only for principles and abstract rules court used.
  2. International trends suggest civil law judges increasingly need to compare problems to past cases for purposes of drawing legal inferences.
  - AI&Law CBR models support prediction and find arguments contra predictions
  - but only if the case facts are represented.
- AI &Law can help judges set standards for describing and reporting facts in a way to maximize legal IR benefits.

Do civil law judges and practitioners reason with cases?

- To what extent is reasoning with precedents practiced in civil law jurisdictions?
- Are there significant differences between how they reason with cases and how their common law counterparts do?
- From a recent comparative study…
  - *Interpreting Precedents*, D. Neil MacCormick and Robert S. Summers (ed.) (1997) Aldershot, UK: Ashgate / Dartmouth
  - Comprehensive, five-year, systematic research study to survey and relate uses of precedent in:
  - nine civil law jurisdictions (e.g., Germany, France, Italy, and Spain)
  - two common law jurisdictions (the United Kingdom and New York State)

Yes, civil law judges and practitioners reason with cases…

- "Precedent now plays a significant part in legal decision making and the development of law in all the countries and legal traditions that we have reviewed." (p. 531)
- "All these systems accommodate justified legal change and evolution through judicial as well as legislative action, that is, through precedent." (p. 535).

Converging trends lead them to reason with cases…

- "Europeanization of Europe:"
  - Courts begin "to rely upon decisions not only of the European Court of Justice, but also of other Member State courts."
  - As European judges confront "foreign values" from the other states, they "need to question, and then to articulate, underlying assumptions."
  - "The style of opinion writing is becoming less ministerial, bold, and declaratory and
  - more discursive, cautious, and fact-oriented.
  - In short, judicial decisions are becoming more amenable to distinguishing and to … use of the fact-based result of the decision in addition to the announced rationale and the discernable principles." (Lundmark, 1998, pp. 223-4).
- Computerization:
  - "The proliferation of computers puts past decisions at the fingertips of judges and lawyers."
- Regulation Density, Changing Norms:
  - As the "density of regulation" increases and as norms change more rapidly, "the same set of facts raises more legal issues than before. Consulting previous decisions (precedents) helps to chart one's way through the legal thicket of, for example, the burgeoning European private law."
- Judicial Self-Protection:
  - Also, a "self-imposed adherence to precedent" will help judges "to reduce political disapproval, and to forestall legislative measures to restrict their ability to stray from precedent." (Lundmark, 1998, pp. 223-4).

But differences persist…

1. **Few statements of facts:**
   - "[M]ost officially published civil law opinions … do not include … detailed statements of facts."…This matters because "what is reported substantially determines what is readily available to be used as a basis for argumentation in later cases." (MacCormick and Summers, 1997, p. 536).
2. **Different significance:**
   - In civil law judicial opinions "there is usually none of the detailed analysis and in-depth discussion of the point and purport of rulings on issues in prior cases…. [P]recedents are commonly conceived as loci of relatively abstract rules or (perhaps even more) principles, …
   - There is usually not, as in common law systems, a restriction of the binding element to a ruling on an issue of law considered in the special light of the material facts of the case.
   - Thus, what we call the model of particular analogy plays far less part here." (pp. 536-7).
3. **No focus on holdings:**
   - In civil law systems, there is "no tradition of differentiating systematically in regard to a precedent opinion between *ratio decidendi* and *obiter dicta* – between holding and dictum – as in the common law." (p. 537).

And more differences…

4. **Rules not contextualized:**
   - "[R]ules in the common law are contextualized within and emerge from fact situations and fact patterns. …
   - [I]n most civil law systems ... the verbal formulations of general rules (statutory and other) and any relevant interpretive methodology are usually the primary determinants of their ultimate scope (always, of course, in conjunction with whatever article of statute or code may require interpretation in the decision)." (p. 537).
5. **No focus on distinguishing:**
   - "[N]o sophisticated methodology of distinguishing precedents otherwise arguably applicable has developed in any of the civil law countries (again, constitutional cases aside), yet distinguishing has long been something of a high art among practitioners and judges in the common law countries."
   - In civil law countries, "tacit overruling or other departure" is employed. This obscures lines "that ought to be drawn between closely analogical precedents that point in different directions." (pp. 538-9).
6. **Lines of precedents required:**
   - "[I]n most of the civil law countries, a single precedent is usually not on its own sufficient to count as authoritatively settling a point of law (again, constitutional cases aside).
   - Several precedents, that is a 'line' of precedents, are usually required…." (p. 538).

And still more differences…

6. **Subsequent court departures:**
   - "[A] vital difference concerns the liberty of even lower courts to depart from a single higher-court precedent, or even from a line of several precedents….
   - In Italy, Germany, Finland, France and Spain at least, apparently settled points can be reopened even by trial courts of general jurisdiction on their own judgment as to what is the law, or good law." (p. 538).
7. **Tacit following, tacit departures:**
   - "Precedents may be followed, confirmed even, by courts of final instance without express citation or mention."
   - Likewise, "[I]n five of the civil law systems in our study, Sweden, Italy, Spain, France, and Norway, the higher and highest courts consciously, and with some regularity, depart from precedent without even mentioning this fact." (p. 539).
8. **Not formal sources of law:**
   - "[T]hese features … are symptomatic of a conception of precedent that deems it something other than or less than a full-dress formal source of law and which, accordingly, has somewhat lower normative force." (p. 539).

Differences persist even if goal is uniform interpretation of the same law (e.g., CISG)!

- Fundamental differences persist in:
  - "what the national courts consider to be primary and secondary sources of legal authority" and
  - "differences across legal cultures in the understandings even of what a judicial decision is." (Curran, 2001, pp. 67f).
  - U.S. judge striving to apply the CISG uniformly is prepared to consult prior CISG case law.
  - French judge expects to consult scholarly commentary rather than judicial decisions.
- U.S. judge would be perplexed by a French judicial application of the CISG:
  - French court opinion might consist of one sentence without any clear description of the case's underlying factual scenario.
  - It is inaccessible without the explanatory scholarly commentary that French lawyers seek when trying to understand French judicial decisions.
- Conversely, French judge assessing United States CISG case law instinctively looks for *la doctrine*,
  - the scholarly commentary that occupies a privileged position of influence on French court adjudications.
  - To a common-law trained legal mind it seems tainted by the scholar's interpretive subjectivity, not to speak of by the lowly status of American scholars in terms of their influence on court decisions. (Curran, 2001, p. 68).

Abstract vs. Fact-Based Precedent Scenarios

	Abstract Precedent Scenario (Civil Law)	Fact-Based Precedent Scenario (Common Law)
Precedent:	•Contains little if any description of facts. •Particular facts of no particular interest to subsequent court; •Bear little relevance to use court will make of the precedent.	•Contains rich description of the facts involved. •Important to know that another / higher court came to particular decision in similar factual context.
Decision shows:	•that another / higher court referred to an abstract rule or principle •in connection with the particular article of a statute or code that requires interpretation in the current problem, and/or •Formulated the abstract rule or principle in a particular way.	•that under factually similar circumstances, the plaintiff won/lost a particular: –kind of legal claim, –issue involved in that kind of legal claim, or –issue involved in that kind of legal claim for a particular reason.

Utility of Fact-Based Precedents Does Not Depend on *Stare Decisis*

- Essential difference between Fact-Based and Abstract Precedent Scenarios :
  - F-B Precedent emphasizes importance of comparing current problem facts with factual scenario in precedent.
- Even if *stare decisis* does *not* apply, F-B Precedent useful
  - As an influential example.
  - Reminds court of claims, issues or reasons relevant in factual context.
  - To persuade court that a similar decision in the problem is a good result, or
  - that the reasons for decision in the precedent do *not* apply in current problem; a different result may be better, normatively.
- F-B Precedent may provide formulation of abstract rule, but
  - Factual context and decision demonstrate what rule or principle (and thus the statute) means.

Should Civil Jurisdictions Care about CBR?

- AI & Law CBR models involve Fact-Based Precedents:
  - Not necessarily models of *stare decisis*, but
  - "Model[s] of particular analogy"
  - Ako argument civil law judges using Abstract Precedents don't care about.
- Civil judges may never change mode of legal argument,
  - but they should report facts more fully
  - *even* if they only care about Abstract Precedent Scenario.
- Reasons why civil cases should report facts more fully
  1. Including facts may improve legal information retrieval of abstract rules.
  2. Predicting case outcomes requires cases with facts.
  3. Facts needed to generate the best arguments contra the predicted outcome.

1. Case Facts May Improve Legal IR

- Assume judges retrieve only Abstract Precedents.
  - Their queries employ:
    - legal concepts in abstract rules or principles,
    - citations to relevant statutory provisions
  - Bayesian inference network still works with database of fact-deficient opinions.
- Problems occur if:
  - user unsure of terms in the abstract rules or principles.
  - terms in the abstract rules or principles are ambiguous.
  - same terms appear in a variety of contexts.
- IR might work *better* if opinions also had fact descriptions.
  - If stored opinions contain facts, simply add problem's facts to the query.
  - Even if case facts are deemed irrelevant to interpreting abstract rule or principle…
  - Retrieving factually similar cases increases chances that retrieved abstract rules or principles are relevant in user's intended context.

2. Predicting Outcomes with IBP

(Brüninghaus & Ashley ICAIL-03)

Input: Current fact situation

Identify issues

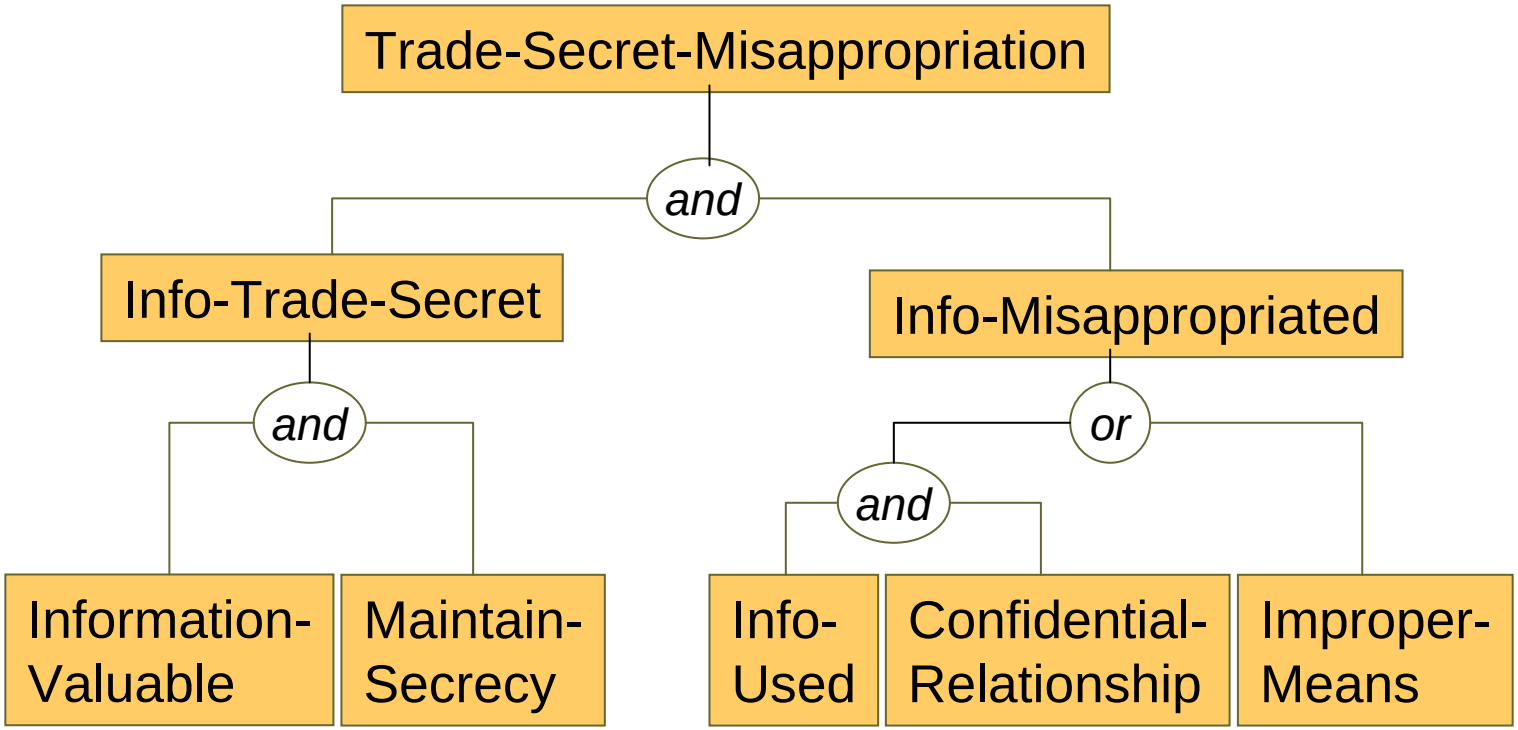
Determine favored party for each issue:

- If factors favor same side, return side, else
- Scientific, evidential reasoning with cases:
  - If cases found with issue-related factors
    - Test hypothesis that majority side should win
    - Explain-away counterexamples
  - Otherwise, Broaden-Query

Combine analysis from issues

Output: Predicted outcome and explanation

IBP Domain Model



F15 p Unique-Product
F16 d Info-Reverse-Engineerable
…

F6 p Security-Measures
F27 d Public-Disclosure
F4 p Nondisclosure-Agreement
F10 d Info-Disclosed-Outsiders
F12 p Restricted-Disclosures
F19 d No-Security-Measures

…

F1 d Disclosure-In-Negotiations
F21 p Knew-Info-Confidential
…

F14 p Restricted-Materials-Used
F25 d Reverse-Engineered
…

Domain Model's Intermediate Legal Concepts

Uniform Trade Secrets Act, Restatement of Torts

Logical Structure of Trade Secrets Law

"Trade secret" means information, [...] that:

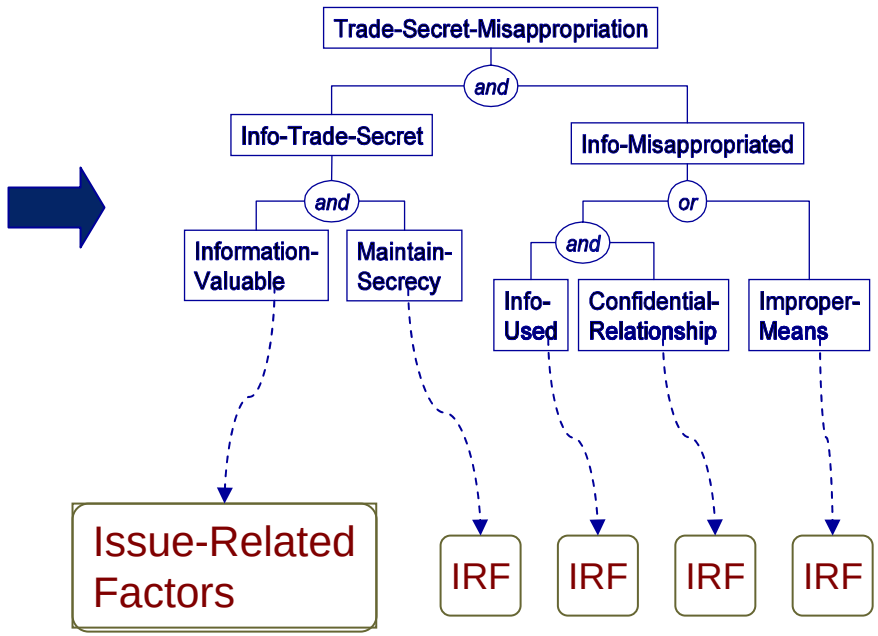
(i) derives independent economic value, [...] from not being generally known to, and not being readily ascertainable by proper means [...] and

(ii) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

One [...] is liable for trade secret misappropriation if

(a) he discovered the secret by improper means, or

(b) his disclosure or use constitutes a breach of confidence [...]



Factor Representation in HYPO/CATO

(Ashley Ph.D. 1988, Book, 1990 MIT Press; Aleven 2003))

- CATO Factors are Boolean simplifications of HYPO Dimensions:
  - stereotypical fact patterns that strengthen/weaken plaintiff's (p) legal claim vs. defendant (d)
- Examples from trade secret misappropriation law:
  - Security-Measures: p stronger the more security measures it took to protect info.
  - Agreed-Not-To-Disclose: p stronger to extent entered into nondisclosure agreement.
  - Secrets-Disclosed-Outsiders: p stronger the fewer disclosures of info to outsiders.
  - Outsider-Disclosures-Restricted: p stronger to extent disclosees restricted from disclosing info to others.
  - Competitive-Advantage: p stronger the greater competitive advantage d gained.
  - Disclosure-In-Negotiations: p stronger to extent it did not disclose secret to d in negotiations.

Factors in the *Mason* Problem

Text:

In 1980, a restaurant owner named Mason developed a combination of Jack Daniel's whiskey, Triple Sec, sweet and sour mix, and 7-Up to ease a sore throat. He promoted the drink, dubbed "Lynchburg Lemonade" for his restaurant, "Tony Mason's, Huntsville", served it in Mason jars and sold T-shirts. Mason told the recipe only to his bartenders and instructed them not to reveal the recipe to others. The drink was only mixed out of the customers' view. The drink comprised about one third of the sales of alcoholic drinks. Despite its extreme popularity, no other establishments had duplicated the drink, but experts claimed it could easily be duplicated.

In 1982, Randle, a sales representative of the Jack Daniel's Distillery, visited Mason's restaurant and drank Lynchburg Lemonade. Mason disclosed part of the recipe to Randle in exchange, Mason claimed, for a promise that Mason and his band would be used in a sales promotion. Randle recalled having been under the impression that Mason's recipe was a "secret formula".

Randle informed his superiors of the recipe and the drink's popularity. A year later, the Distillery began using the recipe to promote the drink in a national sales campaign. Mason did not participate in the promotion or receive other compensation.

Factors:

F6 Security-Measures p

F15 Unique-Product p

F16 Info-Reverse-Engineerable d

F1 Disclosure-in-Negotiations d

F21 Knew-Info-Confidential p

IBP Output for *Mason*

Prediction for MASON, which was won by ???
Factors favoring plaintiff: (F21 F15 F6)
Factors favoring defendant: (F16 F1)

Issue raised in this case is SECURITY-MEASURES
Relevant factors in case: F6(P) PLAINTIFF.

Issue raised in this case is CONFIDENTIAL-RELATIONSHIP
Relevant factors in case: F1(D) F21(P)
Theory testing has no clear outcome, try to explain away exceptions.
Cases won by plaintiff:
BOEING (F1 F4 F6 F10 F12 F14 F21)
BRYCE (F1 F4 F6 F18 F21)
DEN-TAL-EZ (F1 F4 F6 F21 F26)
DIGITAL-DEVELOPMENT (F1 F6 F8 F15 F18 F21)
FOREST-LABORATORIES (F1 F6 F15 F21)
GOLDBERG (F1 F10 F21 F27)
…
Cases won by defendant:
ECOLOGIX (F1 F19 F21 F23)
Trying to explain away the exceptions favoring DEFENDANT
ECOLOGIX can be explained away because of the unshared ko-factor(s) (F23 F19).
Therefore, PLAINTIFF is favored.

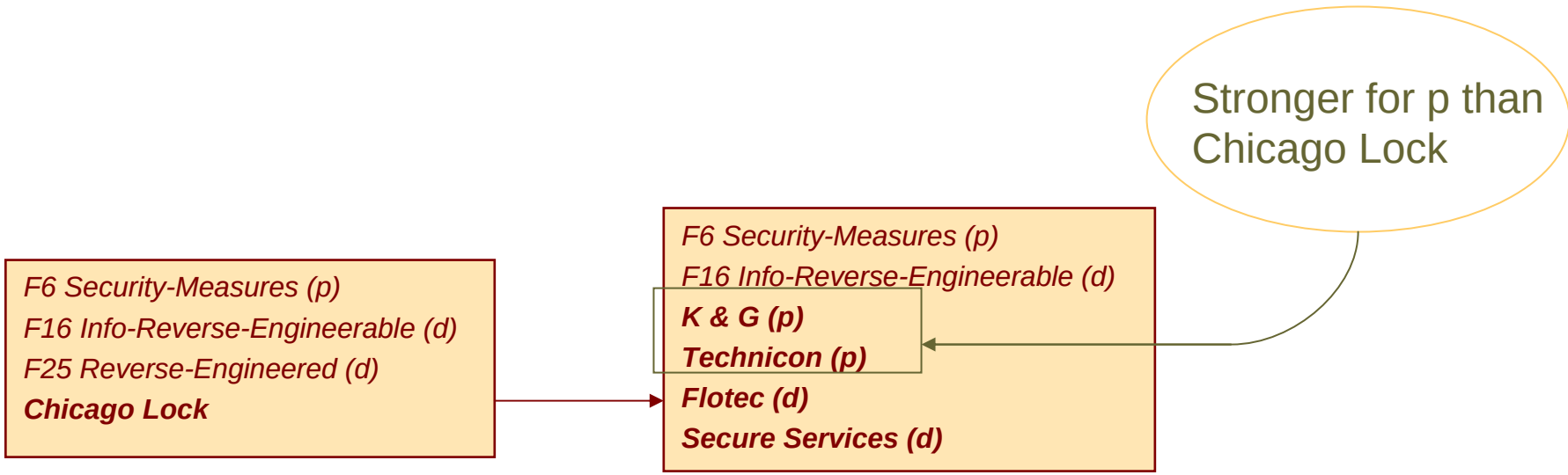
Issue raised in this case is INFO-VALUABLE
Relevant factors in case: F16(D) F15(P)
Theory testing has no clear outcome, try to explain away exceptions.
Cases won by plaintiff:
AMERICAN-CAN (F4 F6 F15 F16 F18)
HENRY-HOPE (F4 F6 F15 F16)
ILG-INDUSTRIES (F7 F10 F12 F15 F16 F21)
KAMIN (F1 F10 F16 F18 F15)
KG (F6 F14 F15 F16 F18 F21 F25)
…
Cases won by defendant:
NATIONAL-REJECTORS (F7 F10 F15 F16 F18 F19 F27) Trying to explain away the exceptions favoring DEFENDANT:
NATIONAL-REJECTORS can be explained away because of unshared ko-factor(s) (F27 F19).
Therefore, PLAINTIFF is favored.

Outcome of the issue-based analysis:
For issue CONFIDENTIAL-RELATIONSHIP, PLAINTIFF is favored.
For issue SECURITY-MEASURES, PLAINTIFF is favored.
For issue INFO-VALUABLE, PLAINTIFF is favored.
=> Predicted outcome for MASON is PLAINTIFF, which is correct.

Prediction with CATO

(Aleven 2003; Brüninghaus & Ashley, 2003)

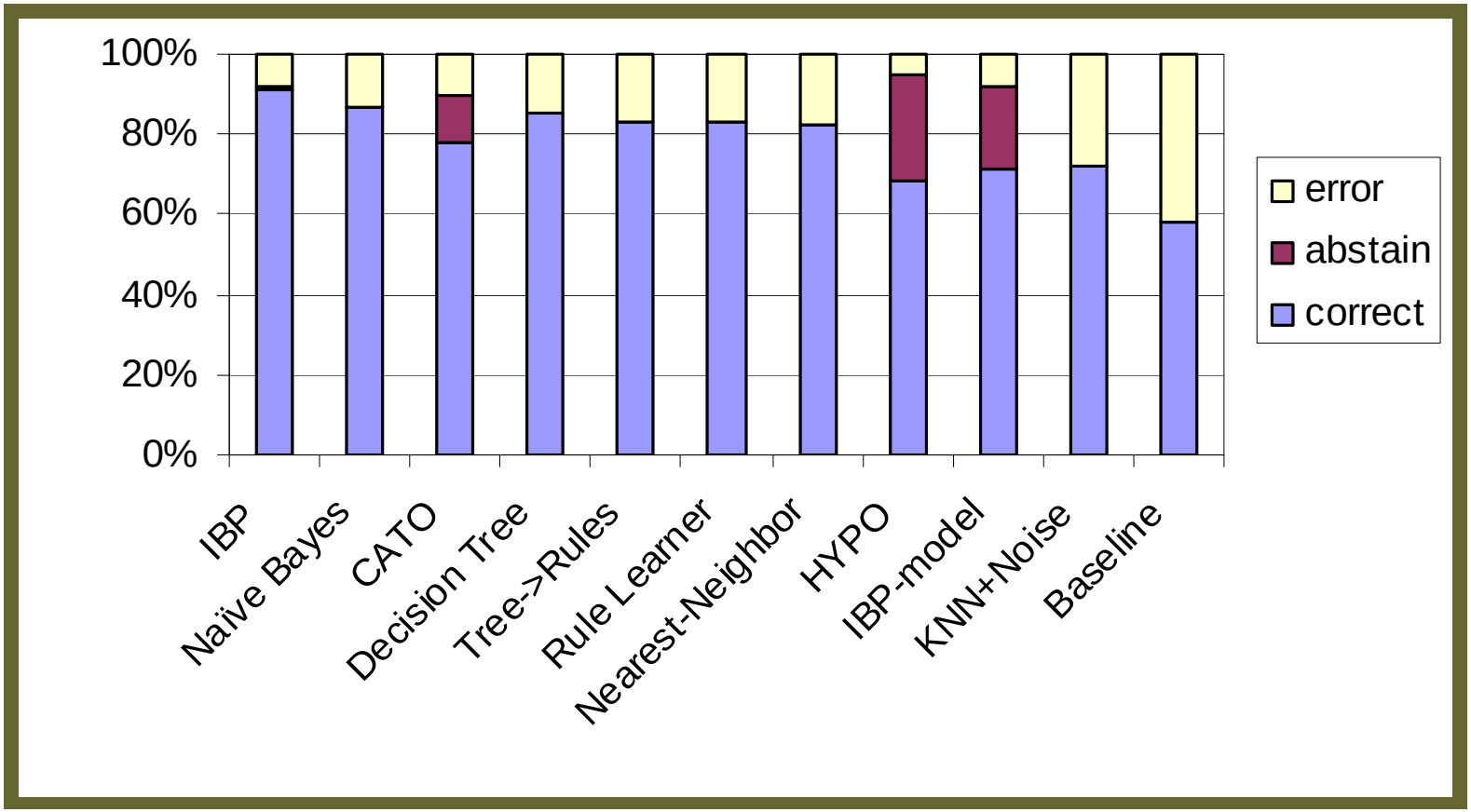
1. Filter out significantly distinguishable cases
   - Distinction can be emphasized but not downplayed.
   - Use Factor Hierarchy info about Factors and Issues.
2. If all remaining Best Untrumped Cases have same outcome, predict it; otherwise abstain.



Evaluation of IBP Algorithm

- 148 cases in CATO database, plus 38 new cases
- Experiments run in leave-one-out cross-validation; Relevance tested with McNemar's test

- Compare IBP with:
  - Baseline: predict majority class
  - Standard machine learning algorithms
  - Prediction based on CATO/Hypo relevance criteria



3. Find Strongest Arguments Despite Predictions

- CATO retrieves 7 pro-p BUCs for *Mason*, but also hypothetical BUC *c:*
  - Won by defendant with factors: F1(d) F4 (p) F16 (d), F18 (p), F19 (d), and F27 (d).
  - Causes CATO to abstain from prediction.

- CATO finds no significant distinctions for case *c*
  - *c* has two strong pro-d Factors, F19 (d) and F27 (d), but
  - It can downplay these distinctions:
  - In *Mason* and *c*, since the shared Factors F1 (d) and F16 (d) show that the information could have been discovered by proper means, plaintiff is not significantly worse off in *c* than *Mason* even though it publicly disclosed the information F27 (d).

- From normative viewpoint, a good, reasonable argument for defendant.

- Of course, this is characteristic of Fact-Based Precedent Scenario.

AI & Law Opportunity in Civil Law Jurisdictions

- If civil law judges have not yet adopted standards for reporting case facts, AI & Law can help determine standards
  - with eye toward helping computational models process case texts automatically.

1. Standard structure for case opinions:
   - demarcate opinion parts that describe facts, law, application of law to facts.
2. Standard ways for indicating parties' roles, claims, who won.
3. Standardized ways of describing facts:
   - Factors, who they favor, issues for which factors are relevant.
   - Mark-up or tag facts *criterial* for conclusions about legal issues.
4. Institutionalize conformance to standards:
   - networked opinion-writing environments that incorporate tools, standards into word-processing infrastructure.

Conclusions

- Civil law judges reason with precedents, but
  - in a very different way from their common law counterparts.
  - Abstract Precedent Scenario (Civil Law) vs. Fact-Based Precedent Scenario (Common Law).
- Reasons why civil law judges should more fully report case facts:
  1. Computerized full-text legal IR may work better with fuller fact descriptions
     - even if the goal is to retrieve cases only for principles and abstract rules court used.
  2. International treaties and trends suggest civil law judges need to compare problems to past cases for purposes of drawing legal inferences.
  - AI&Law CBR models support prediction and find arguments despite predictions
  - But require case facts to be represented.
- AI &Law can help judges set standards for describing facts.

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