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Eliding The Arguments of Cases

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Eliding The Arguments of Cases

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I

Joseph Raz ventured in *The Authority of Law* to describe the case with a set of letters.¹

A reported decision, P, records that in that case where the facts were a, b, c, d, e, g, the decision was based on the rule that whenever A, B, C then X should be decided. The ruling in P, can be summarized as:

[P] a, b, c, d, e, g / A, B, C \rightarrow X.

The novel case, N, is a case of a_1 , b_1 , c_1 , not- e_1 , f_1 , and is thus governed by P ...²

Raz identifies two important patterns of legal reasoning which he can describe symbolically. The first is *distinguishing*:

The rule laid down in P was when A, B, C then X. Since N is a case of a_1 , b_1 , c_1 the rule applies to it. But the court has a power to distinguish. It can change the rule into A, B, C, E, then X.³

The second is *analogizing*:

If the facts in the new case N_1 include a_1 , b_1 , and c_1 , there is no room for

¹. Joseph Raz, *The Authority of Law*, "Law and Value in Adjudication," Oxford, 1979, p. 181ff.

². p. 183. Raz does not explain that a_1 and a are distinct instances of A; he only says that a is an instance of A. But this reading seems clear.

³. *Ibid.*, p. 185.

argument by analogy with P. N_1 falls directly under the rule in P ...⁴
 Suppose however, that the new case is N_2 which is a case of $a_2, b_2, \text{not-}c_2,$
 $d_2, \text{not-}e_2$. The ruling in P does not apply to the facts of N_2 . Yet the two
 cases are similar ... : both cases of A, B, D.⁵

Both of these patterns are well appreciated by formalizers of legal reasoning. Raz's point was that distinction and analogy could not proceed on arbitrary similarities and dissimilarities. Rationales of cases would determine which letters are relevant and which irrelevant. But Raz was unable or unwilling to provide a formal account.

In AI and Law, HYPO⁶ improved the model. Not just any letter could be added to the rule of the case or omitted from it. The fundamental change is this: each letter (each feature) is annotated *inherently pro-plaintiff or pro-defendant*. For any decision, each feature can be annotated with a + or - indicating that the feature supports the decision or supports the opposite decision.⁷ In Raz's example,

[P] $a^+, b^+, c^-, d^+, e^-, g^- / A, B, C \longrightarrow X$

might be the annotation if a, b, and d are inherently X-evincing and c, e, and g are inherently evincing of not-X.

With the information thus supplemented, distinction and analogizing can be constrained. A new case which seeks to distinguish, must do so by deleting one of the +-annotated features. Raz's novel case,

[N] $a_1, b_1, c_1, \text{not-}e_1, f_1$

could not be distinguished from P on the grounds of dissimilarity at e. In the HYPO framework, changing P, from e to not-e, can only improve the situation for deciding X in the prior case. Likewise, the rule of the case, P, can be qualified by an additional +-annotated feature, e.g., d^+ , or D:

$A, B, C \longrightarrow X$

can become

$A, B, C, D \longrightarrow X.$

Such a transformation does not occur by adding a feature otherwise annotated, such as e^- , or E.

Of N_2 , Raz's second novel case,

[N_2] $a_2, b_2, \text{not-}c_2, d_2, \text{not-}e_2$

⁴. This simplification of Raz's is a bit too glib: surely there will be some dissimilarities among the facts; to ask whether the dissimilarities are relevant is to start asking questions as to the distinction between "facts," a, and "general properties of facts," A.

⁵. *Ibid.*, p. 202.

⁶. Kevin Ashley, *Modelling Legal Argument*, Ph.D. Thesis, Department of Computer and Information Science, University of Massachusetts, 1988. Many of these same points have been made by other authors, but Raz and Ashley are unusually clear and notationally unifiable.

⁷. Ashley actually used π and δ for annotation of features.

subsumption under the rule of the case, P, is permitted. A negatively-annotated feature, C, has been made dissimilar (since N exhibits C and N₂ exhibits not-C). If A, B, and C together provide a rule for X, and C is inherently evincing of not-X, then, in the HYPO framework, A and B suffice for X.

It is fair to say that the HYPO framework exploits additional knowledge about the reasons: reasons are assumed to be separable (reasons can be considered separately) and monotonic (two + reasons never conspire to have a joint negative effect). This knowledge is at least vaguely representative of the rationale of the decision; it takes a step toward encoding the ratio decidendi.⁸

II

Our picture of the case begins by assuming there is a more detailed record of (the dispute of) the case. With additional information about the precedent case, an even more precise accounting of reasoning from past cases can be had.

In a recent paper, we also assumed that there was considerable structure to a case.⁹ We described several different ways that the rule of the case can summarize the important arguments and counterarguments of the case. The main goal of that work was to describe how a dispute can proceed after one of the disputants questions the use of a case by the opposition. We were principally concerned with the claim that the rationale of the case was not properly captured by a single rule. The effect of a rationale on argumentation was seen to depend on the kind of disagreement that was resolved by the decision of the precedent case.

A simpler and more cogent picture of rationales results when we use our data structure to pursue Raz's questions. For the purposes of this paper, only the data structure will be borrowed from our earlier analysis.

The annotation of a case does not only record which features (which letters) were relevant to the prior decision,

[P] a, b, c, d, e, g / A, B, C → X

and what was the relation between the decision and each feature,

[P] a⁺, b⁺, c⁻, d⁺, e⁻, g⁻ / A, B, C → X.

The record includes the relevant arguments in dispute and their configuration. For example, here is a complete record in which four arguments relate to the decision, X, based on facts a, b, c, d, e, and g.¹⁰

⁸. Ashley freely acknowledges several limitations of this approach: two factors that are individually pro-plaintiff must be pro-plaintiff jointly; there are no factors that are neither pro-plaintiff nor pro-defendant; these determinations can be made independently of other contextual features, etc. Ashley's narrow interest in trade-secrets violation cases makes such annotations worth considering, even if it is not plausible in general.

⁹. R. P. Loui, J. Norman, "Rationales and argument moves," *Artificial Intelligence and Law* 3, pp. 159-189, 1995.

¹⁰. The new symbol, —< is the defeasible reason relation, and might be read "because of." Unlike —>, there is no possible confusion with the material conditional.

[P] X \rightarrow A B
 A \rightarrow a
 B \rightarrow b
 not-X \rightarrow C
 C \rightarrow c

not-C \rightarrow D
 D \rightarrow d

not-X \rightarrow E G
 E \rightarrow e
 G \rightarrow g.

The four arguments can be numbered, Arg₁, Arg₂, Arg₃, and Arg₄:

[Arg₁] X \rightarrow A B
 A \rightarrow a
 B \rightarrow b

[Arg₂] not-X \rightarrow C
 C \rightarrow c

[Arg₃] not-C \rightarrow D
 D \rightarrow d

[Arg₄] not-X \rightarrow E G
 E \rightarrow e
 G \rightarrow g.

Each argument has considerable structure.

[Arg₁] X \rightarrow A B
 A \rightarrow a
 B \rightarrow b

means argument Arg₁ consists of three reasons:

- 1) A and B are jointly reason for X;
- 2) a is reason for A¹¹;
- 3) b is reason for B;

and a and b were undisputed.

The arguments stand in relations, such as disagreement, defeat, counterargument, and interference, about which enough has already been said in related works on formal argumentation with defeasible reasons.¹²

¹¹ Raz was thinking that a is an instance of A. The particular fact situation of a, exemplifying a more general concept A, would mean a fortiori that a is reason for A.

¹² For example, see *Proc. Intl. Conf. on AI and Law*, ACM Press, 1995.

What is more important here is the outline of the case which reveals which arguments were raised in connection with other arguments.

There is a natural separation of features based on the arguments in which they are used. Some features (some letters) occur in arguments that support the decision; some occur in arguments that were used in opposition; some were used in both. This separation will allow a reconstruction of the HYPO model of distinguishing cases. In our reconstruction, moreover, it will not be necessary to assume (as HYPO does) that a feature is inherently pro-plaintiff or pro-defendant for whole classes of judicial decision-making.

III

Our intuition is that an analogy to this case which makes reference to a sharing of the feature D, must also make reference to a sharing of the feature C. The feature D is relevant to the reasoning of the deciding only because D counters the effect of the feature C. Meanwhile, it is too simple to say whether D is relevant or not. It is relevant only insofar as C is relevant.

Let the record of a case (ideally) consist of a set of arguments and a chain of disputation. Each argument is a tree.¹³

For simplicity, assume as Raz apparently did that arguments have three levels. At the top level is the (putative) conclusion of the argument. At the middle level are the legal abstractions, concepts, or terms which, when conjoined, permit the conclusion (defeasibly of course). At the lowest level are evidentiary claims.

The set of arguments is arranged in a disputation chain. In this chain, an argument precedes all of the recorded arguments that attack it. When two arguments attack each other, the argument in support of the decision of the case precedes the argument in opposition. Since there might be several arguments that attack each other, for example, several arguments for p and several for not-p, the chain will be a partial order (not all pairs of arguments can be ordered).^{14,15}

In the example above, {Arg₁, Arg₂, Arg₃, Arg₄} are the arguments in the record of the case. The disputation chain is:

$$\begin{aligned} \text{Arg}_1 &< \text{Arg}_2; \\ \text{Arg}_1 &< \text{Arg}_4; \\ \text{Arg}_2 &< \text{Arg}_3. \end{aligned}$$

One way of writing this chain is:

¹³. A rooted directed labeled tree, where labels may be reused and not be inconsistent.

¹⁴. Of course, disputation trees can be imagined with more complexity, which might be useful in other analyses. For the present purposes, the simple tree proposed will suffice.

¹⁵. Note that this order is partial, irreflexive, asymmetric, and not transitive. It also has stages: elements can be partitioned and ordered so that precedence applies only between members of adjacent blocks of the partition. Mathematicians would call this order some kind of quasi-order mainly because it lacks transitivity. This notation is familiar from LISP though is not the usual representation of an ancestor-generating structure. Here, the list of attacking arguments is simply given right after the attacked argument, and this rule is used recursively.

(Arg₁ (Arg₂ (Arg₃ Arg₄)).¹⁶

We do not now define which analogies to the case are allowed and which are disallowed. Legal interpretation is hard to constrain. Instead, we simply identify three important ways that analogies to cases can be weakened: that is, three ways that the argument of the prior case can be elided. Legal reasoning may permit many kinds of interpretation, and we can sometimes identify the pattern of analogy being used in the interpretation.

The best analogy reproduces all of the evidentiary features of the prior case.¹⁷

One kind of weakening of the analogy *trades legal abstractions for factual situations*. Thus, Raz was moved to write his rules of the case in terms of capital letters, A, and B, instead of a and b. Even the most fastidious critics of analogy must admit that the facts are mediated by the concepts; that other fact situations exemplifying the same legal concepts must admit the same argument. There are still, however, some dangers in this kind of weakening: different fact situations present different opportunities for counterargument and might fail to reproduce the same opportunities for reinstatement; more importantly, different fact situations permit Raz-like distinctions as the rule of the precedent case is reformulated. We refer to this kind of analogy-weakening as *eliding particulars*, or *particulars-eliding*.

Another kind of weakening *cuts short the disputation*. Instead of finding sufficient similarity to make all of the same arguments that were made in the precedent case, certain lines of argument from the prior case can simply be omitted. The similarities between cases that would have served only to allow these lines of argument can be elided. Attacks that were made unsuccessfully in the prior case just cannot be made in the novel case. Some of HYPO's forms of analogizing and distinguishing correspond to analogies weakened along these lines. We refer to this kind of analogy-weakening as *rebuttal-eliding*.

The third kind of weakening *generalizes a single argument by omitting* (or weakening) a legal concept from the middle level of some argument. This might correspond to a reinterpretation of a rule used by an argument. Or it might correspond to using a different rule and trying to adopt, for the new argument, the success of the prior argument. We refer to this kind of analogy-weakening as *prerequisite-eliding*.

Each kind of eliding is a generalization of the "rule of the case."

In the example, the best analogy can be made with the novel case¹⁸

[N_i] a, b, c, d, e, g

although it might be debated that the best case should be

[N_{ii}] a, A, b, B, c, C, d, D, e, E, g, G;

where the same facts have entailed the same legal concepts.

Particulars-eliding corresponds to dropping, for example, a, in exchange for a₂, a different exemplification of A.¹⁹

¹⁶. The partial order of arguments we have in mind can always be written in this form.

¹⁷. And, it might be added, does so with the exact same argumentative discourse. However, since we are not modeling the argumentation in the novel case, and are modeling only the similarity of facts which might permit similar argumentation, nothing more can be said here now.

¹⁸. Recall that it was Raz's example which skipped f.

[N_{iii}] a₂, A, b, c, d, e, g.

The main weakness of this kind of analogy is the opportunity for distinction. If a exemplifies A₁ and a₂ does not, then the adversary could provide a reinterpretation of argument Arg₁: from

[Arg₁] X —< A B
 A —< a
 B —< b

to

[Arg_{1a}] X —< A B
 A₁ —< a
 B —< b.

If the proper symbolization of the precedent case P really involves argument Arg_{1a}, which might be supported by the language of the opinion, then the novel case of a₂ can be distinguished because it fails to exemplify A₁.

Two lesser problems may occur with particulars-eliding analogies. First, a₂ may introduce new opportunities for counterargument, such as

not-X —< A₂
A₂ —< a₂.

These opportunities presumably can be seized by the adversary, after the particulars-eliding analogy has been made. Second, a₂ may not exemplify some other concept which a did, and that concept might be used further down the disputation chain. It might be, for example, that

[Arg_{2a}] not-X —< C
 C —< c d

[Arg_{3a}] not-C —< D
 D —< d a;

where Arg_{3a} was the response to counterargument, Arg_{2a}, in the precedent. Arg_{3a} is available to those cases exemplifying a, but not to those exemplifying a₂. Thus, an analogy based on a₂ (and A, b, c, and d) would be weaker than an analogy based on a (and A, b, c, and d).

Rebuttal-eliding corresponds to dropping, for example, all of the facts associated with Arg₂ and Arg₃: c and d.

[N_{iv}] a, b, e, g.

¹⁹ It is open to discussion whether either side of a dispute may freely abstract facts of arguments, regardless of whether the arguments favor their position. It might be required that one who uses the precedent seeking to establish X elide only the particulars of arguments supporting X. But there seems to be no clear bettering or worsening of analogies having adopted such a requirement.

We require that if the features of some argument are omitted, then so must be the features of the dialectical subtree of that argument (unless the latter features appear somewhere else in the arguing of the case).

HYPO would sometimes permit d without c; we would not. Suppose, as HYPO requires, that d has a generally positive effect on deciding X. Then it does so, in the case of N_{iv} , through some not yet represented, auxiliary argument, not through a strengthened analogy to P. As in HYPO, N_v is a legitimately weakened analogy to P:

[N_v] a, b, e

because it lacks an essential feature, g, which was used (in Arg_4) to attack an argument (Arg_1) which supported the decision of the case.

Prerequisite-eliding corresponds to dropping, for example, a whole branch of argument Arg_1 .²⁰ It is like using

[Arg_{1b}] X \rightarrow A
 A \rightarrow a

instead of

[Arg_1] X \rightarrow A B
 A \rightarrow a
 B \rightarrow b.

Thus, the novel case

[N_{vi}] a, c, d, e, g

or even simply

[N_{vij}] a

might be subsumed under P by eliding prerequisites.

Usually Arg_{1b} is too weak an analogy, and a different mediating concept is substituted:

[Arg_{1c}] X \rightarrow A B₂
 A \rightarrow a
 B₂ \rightarrow b;

where B is a subclass of B₂.

²⁰ If there are no defeasible reasons used in rules, then particulars-eliding and prerequisite-eliding are equivalent.

In such cases, the judicial opinion is being reinterpreted to permit the extension from B to B₂. It may well be that the rule in question is seminal with this case, P. Whether it should be rendered A B \supset X or A B₂ \supset X is a fair question. The possibility of representing the rule of the case in various ways is a normal part of legal reasoning.

IV

Consider a more concrete example.²¹ The features of the case are:

- a = *Signs on one's own property are a uniquely effective form of expression*
- b = *The City of Ladue has banned all signs displayed from houses*
- c = *The City of Ladue has a substantial aesthetic interest in banning signs*
- d = *Neighboring municipalities lacking a sign ban do not suffer proliferation*
- e = *Ladue's ordinance specifies a restriction on place and manner*
- g = *Ladue's ordinance permits messages displayed on flags and in cars*

and the relevant concepts are:

- X = *The ordinance is invalid*
- A = *The restricted medium is unique*
- B = *The ordinance practically eliminates a medium of communication*
- C = *The ordinance serves a compelling municipal interest*
- D = *There is lacking evidence that signs would proliferate without the ban*
- E = *The ordinance regulates the time, place and manner of speech*
- G = *The ordinance allows alternate forms of expression*

The record of the case interpreted

| | |
|---------------------|---|
| X \supset A B | <i>invalid ordinance</i> |
| A \supset a | <i>medium is unique</i> |
| B \supset b | <i>practically eliminates a medium</i> |
| not-X \supset C | <i>valid ordinance</i> |
| C \supset c | <i>serves a compelling municipal interest</i> |
| not-C \supset D | <i>not compelling</i> |
| D \supset d | <i>lacking evidence of proliferation</i> |
| not-X \supset E G | <i>ordinance</i> |
| E \supset e | <i>regulates time, place and manner</i> |
| G \supset g. | <i>allows alternate expression</i> |

Particulars-eliding is natural, since future cases presumably are not about The City of Ladue.²² d is the most

²¹. This is a fanciful and incomplete formalization of a U.S. Supreme Court case of local origin, *Ladue v. Gilleo* 514 U.S., 1994.

interesting in this regard, since it need not be elided. Clearly a case in which an alleged proliferation of signs was questioned on other grounds would fall under this case. For example, it might be that in a novel case of putative similarity, The City of Clayton tried to pay its residents to display signs and failed to induce sign proliferation.

Rebuttal-eliding permits analogies to the prior case when the novel case concerns a municipal ordinance that practically eliminates a medium of communication. The novel case need not involve municipal interest or time, place, and manner. For example, a complete ban on magazines enacted to regulate commerce might still refer to this case. The novel case could include the issue of whether the municipal interest were compelling,²³ but could not include the observation that sign-proliferation is unestablished without also raising the issue of municipal interest.²⁴

Prerequisite-eliding is best exemplified with A in Arg₁. The requirement that the ordinance be unique can be relaxed in valid analogies. The lesser requirement that the medium be uniquely practical and convenient might be substituted as a reinterpretation of Arg₁ in the prior case.

V

The rule of the case, or the rules of the case, are not as useful as the record of the case. Nevertheless, one might try to extract canonical rules from a case; one may favor some forms of elision of the arguments over others. The canonical rules might be all particulars-eliding, with varying amounts of rebuttal-eliding, and with no prerequisite-eliding. For our example, they should be:

A B C D E G >— X
 A B C E G >— X
 A B E G >— X
 A B C D >— X
 A B C >— X
 A B >— X

Although the use of a more detailed data structure makes it no longer possible to speak of a single rule of the case, it does contribute to a finer analysis and understanding of the case's rationale.

The rationale of the case is exactly the record of disputation. The text of the opinion demarks the relevant from the irrelevant features, determines which combinations of features make sense. To substitute for the record of disputation a rule or a list of features is an elision: it is an omission, not merely an abridgement, of what is essential for applying the precedent to new cases.

²² b does not even seem to be a feature of the case, except that it is a fact true at the time of the case.

²³ Note that neither C nor not-C is actually decided in the prior case, so it is the issue of C vs. not-C that provides the grounds for similarity.

²⁴ Absence of sign-proliferation might be relevant to the decision on some other grounds, for example, to establish malice or caprice of the ordinance. But as interpreted here, the record raises the issue only in connection with compelling interest.