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5. Analogy and balancing*

The partial reducibility thesis and its problems

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Abstract

The structure and sequences of analogous reasoning serve to show the implausibility of the ‘partial reducibility thesis’ stating as it does that analogy is reducible to balancing of legal principles. Problems raised by the partial reducibility thesis include the contingency of reducibility and the fact that analogous reasoning proper is done under the cover of balancing. Analogy and balancing have opposite normative conditions, explaining the unacceptability of the reducibility enterprise.

Keywords: balancing, analogy, partial reducibility, contingency of reducibility, normative conditions

1 Three as the starting point for analogy and balancing

The idea that the application of law includes three basic operations, subsumption, balancing, and analogy, has recently become a central issue in legal theory, yielding new insights into the analysis of their connections: (i) subsumption and analogy, (ii) subsumption and balancing, and (iii) analogy and balancing. However, taking into account that a subsumption is performed in every instance of the application of law and that analogy and balancing are only used under their specific normative conditions, it follows that the third connection is the only one that links basic operations

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that are, from this point of view, normatively contingent. This feature of analogy and balancing poses some particular problems: (i) what are the specific normative conditions of each one of them, (ii) if there is any intersection between those conditions, and (iii) to what extent can analogy and balancing be combined or interfere with each other. It is precisely here that the partial reducibility thesis comes into play (Brożek, 2008, pp. 188ff.). Formulated as an explanation of analogy in terms of balancing, this thesis deals specifically with the problems raised by the connection between these two basic operations in the application of law.

2 Analogy step by step: some basic considerations on the sequence

Although it is also used to represent the operation of comparison in itself, analogy is, strictly speaking, a result: the establishment, for any purpose, of a relation of similarity.\(^3\) In order to reach the final point, some steps must be taken: (i) identification of the terms in comparison, (ii) list of comparison factors, (iii) evaluation of similarity or non-similarity under each factor, (iv) choice of the decisive factor, and, (v) conclusion of analogy, if it is the case under the factor chosen.\(^4\) The overall operation is therefore relatively complex.

And it is immediately complex regarding factors of comparison: as we know, they are naturally endless.\(^5\) Regardless of what is being compared, anything can be used as a factor, considering the unlimited properties falling under the terms and the infinite external criteria of analysis. Since the context of the comparison allows us to narrow down the set of factors, this decreasing effect gives some manageability to the process.

- When comparing cars \((c)\) and bicycles \((b)\), the set of factors is endless: \(f_1\) price, \(f_2\) speed, \(f_3\) metal texture, \(f_4\) comfort, \(f_5\) beauty, \(f_6\) how it pleases John, and so on;
- if \(c\) and \(b\) are compared for buying purposes, the set is narrowed: some factors may become irrelevant; for instance, \(f_3\) metal texture or \(f_6\) how it pleases John.

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1 The first premise seems undeniable: no legal case can be solved without the fulfilment of an antecedent (of a norm or a decision-norm). The second premise will be explained below.
2 Naturally, the kind of analogy considered here is the one regarding a classification and not the analogy supporting a prediction (Macagno and Walton, 2009, p. 171).
3 On analogy steps, Araszkiewicz, 2011, p. 103.
Complexity also comes from the evaluation of similarity or non-similarity that each factor confers. For each of them, a judgment has to be made in order to state or refute similarity. In a way, this step is the core of analogy: it is here that the terms of a comparison are effectively confronted under the specific analysis of resemblance. Its importance cannot be overlooked: inconsistent judgments made at this level often lead to false analogies.6

– Comparison between \( b \) and \( c \) under \( f_1 \) can lead to: \( \neq \text{ or } = \); 
– under \( f_2 \) it can also lead to \( \neq \text{ or } = \); and so on for all factors.

Even if it is narrowed by its context, a comparison may still have to be made under a plurality of factors. From this it follows that different evaluations of similarity and non-similarity may be carried out. Therefore, for the terms in comparison, a table with different results appears: terms are similar under some factors and non-similar under others. As would be expected, under a common list of factors, the more proximate are the terms, the fewer are the results of non-similarity.8

– For \( b \) and \( c \): 
  \[ f_1 \neq, f_2 \neq, f_3 =, f_4 \neq, f_5 \neq, f_6 =; \]
– for \( b_1 \) and \( b_2 \), hypothetically: 
  \[ f_1 =, f_2 =, f_3 =, f_4 =, f_5 \neq, f_6 =. \]

The complexity of analogy, however, resides in the choice of the decisive factor.9 If certain terms are similar under a factor and non-similar under another, the conclusion of the analogy is wholly dependent on the selected factor. This choice is, nonetheless, external to the comparison: the equal position of each factor in relation to the terms implies that the operation in itself holds no criteria to define any kind of prevalence (Alexy, 2010, p. 17; Aarnio, 1987, p. 104). Thus, the overall analogy operation is decided through a meta-factor: the one that decides which factor, all things considered, is chosen.

– For \( b \) and \( c \): 
  \[ f_1 \neq, f_2 \neq, f_3 =, f_4 \neq, f_5 \neq, f_6 =; \]
– for \( b \) and \( c \): 
  \[ (f_1 \neq) \lor (f_2 \neq) \lor (f_3 =) \lor (f_4 \neq) \lor (f_5 \neq) \lor (f_6 =); \]
– for \( b \) and \( c \), hypothetically: 
  \[ mf \rightarrow f_3 \rightarrow b = c. \]

7 Symbols = and \( \neq \) are used here for simplification purposes, just to represent similarity and non-similarity.
8 And vice versa. On quantitative similarity see Davies and Russell, 1987, p. 265.
9 Or factors: all references to a decisive factor naturally include a set of decisive factors.
3 The same steps in the analogy of legal cases

The previous scheme is entirely applicable when the operation is used to provide a solution for a case unforeseen under any norm of the legal order. Here, where no answer to the legal question is provided, an operation of analogy is required to define whether the case at hand is similar to another case which fulfils the conditions foreseen in an enacted norm. Legal cases, then, become the terms to be compared. If the conclusion is an analogy, then the *prima facie* inapplicable norm becomes the decision-norm of the case and the legal question is answered (Santiago Nino, 2003, p. 293; Weinreb, 2005, pp. 97ff.).

- Case: ‘allowing motorcycle entry into a park’;
- no norm on entering the park with motorcycles;
- norm : ‘cars are not allowed to enter the park’;
- ‘car entry’ (c) and ‘motorcycle entry’ (m) are terms of comparison;
- if analogous, ‘entry on a motorcycle’ is also not allowed.

When the terms of comparison are cases, as in legal reasoning by analogy, the context of the comparison is provided by the legal question: what matters here is to have an answer for the deontic status of an unforeseen action. The endless list of factors is narrowed precisely by that question. Factors with no bearing on this normative issue will be irrelevant for the comparison (Araszkiewicz, 2011, p. 102; Roth, 2000, p. 115).

- Cases: ‘allowing car entry into a park’ (c) and ‘allowing motorcycle entry into a park’ (m);
- legal question: is entry of a motorcycle allowed?;
- irrelevant factors: $f_1$ number of wheels, $f_2$ comfort for the driver, and so on;
- relevant factors: $f_3$ pollution, $f_4$ danger to pedestrians, and so on.

Even if it is narrowed down, there still may be a plurality of factors, which may lead to a table with different results: no matter how reliable each evaluation is, any two cases may be similar under one factor and non-similar under another.

- For c and m: $f_3 \neq, f_4 \neq, f_5 =, f_6 \neq$.

The results of similarity and non-similarity offered by the table of comparison now reveal the main problem of the analogy operation: the selection of the decisive factor. As we have seen, if the decisive factor implies an evaluation of similarity, then a conclusion of analogy follows. If not, the legal question remains without a legal solution, in what strictly regards the analogy operation.

- For $c$ and $m$: $(f^3_1 \neq) \lor (f^4_1 \neq) \lor (f^5_1 =) \lor (f^6_1 \neq)$;
- for $c$ and $m$: if $f^5_1 \rightarrow \text{‘motorcycles are not allowed to enter into the park’}$;
- for $c$ and $m$: if $f^4_1 \rightarrow \text{no analogical answer}$.

Generally, the decisive point in legal reasoning by analogy also rests upon the definition of the meta-factor according to which the prevailing factor is selected. However, this meta-factor must be sustained by the legal order: if in an analogy operation the conclusion supports something that works as a ‘new norm’, no other option can be upheld. The problem is, of course, how.

4 The partial reducibility thesis

In the context of basic operations in application of law, the partial reducibility thesis constructs analogical reasoning under the statement that analogy can be partially explained through balancing (Brożek, 2008, p. 193). The thesis supports the assumption that the analogy operation is only partially autonomous: apart from a strictly analogical step, it is for the remaining part reducible to balancing. Thus, for the legal question at hand, the solution is drawn by weighting conflicting principles, as in any balancing (Brożek, 2008, p. 194).

The partial reducibility thesis depends, however, on a distinction between two levels of similarity: similarity\textsubscript{1} and similarity\textsubscript{2}. The first, which is equivalent to the context of the comparison mentioned above, stands for the proximity of cases brought by the legal question at hand. This question defines as similar all cases whose solution is an answer to the same legal problem, setting the boundaries for an initial stage of similarity.\textsuperscript{10} Cases selected here are then subject to further evaluation.

- Legal question: are motorcycles allowed into the park?
- norm\textsubscript{1}: ‘cars ($c$) are not allowed into the park’;

\textsuperscript{10} Which is, as stated, an unproblematic level of similarity (Brożek, 2008, p. 191).
– norm₁: ‘bicycles (b) are allowed into the park’;
– no norm on motorcycle (m) entrance into the park;
– norm₂: ‘speed limit for bicycles (b) in the park is 10 km/h’;
– cases c and b are similar₁ to the ‘m’ case;
– b speed limit case is dissimilar.

The second, similarity₂, is the decisive level of similarity, since it creates a norm for the case establishing the legal solution. Here, cases that were selected at the level of similarity₁ have to be compared and a decision on the ‘relevant similarity’ must be carried out. As similar₁ cases are linked to different solutions, the answer to the legal question is given by the case that is evaluated as similar₂. For this reason, similarity₂ stands for a deeper and conclusive choice of similarity (Brożek, 2008, p. 191).

– No norm on motorcycle (m) entrance into the park;
– car (c) case: ‘cars are not allowed into the park’;
– bicycle (b) case: ‘bicycles are allowed into the park’;
– if m = c → m ¬P park;
– if m = b → m P park.

The core of the partial reducibility thesis, however, is to be found in the way similarity₂ is defined and solved. As cases selected under similarity₁ are linked to a specific solution, the main point is to discover the principles backing each one of those solutions. Since these principles are, by definition, pointing in different directions, a common scenario for conflicting principles is created (Brożek, 2008, p. 194).

– Car (c) case norm₁ ‘cars are not allowed into the park’ is backed by P₁;
– P₁: ‘the environment should be protected by law’;
– bicycle (b) case norm₂ ‘bicycles are allowed into the park’ is backed by P₂;
– P₂: ‘everyone has freedom of action’;
– on the question of whether motorcycles are allowed into the park, P₁ and P₂ conflict.

11 In its original presentation, the principle mentioned here is ‘people are entitled to rest actively’ (Brożek, 2008, p. 194). However, because it is legally more accurate, the principle used in the text is the one adopted, within the same context, by Robert Alexy (Alexy, 2010, p. 16). The change does not affect the scheme in any way.
In the case of conflicting principles, the solution is given through balancing, namely with the ‘Weight Formula’: here, principles are weighted against each other and one of them will prevail over the other. Accordingly, the prevailing principle yields the solution for the case and a ‘collision rule’ is created with the case facts and the consequence drawn from the winning principle. With this approach, the problem of similarity was transformed into a problem of weighting principles, which encompasses, as the partial reducibility thesis sustains, a significant advantage: instead of asking which terms are similar, only a simple balancing needs to be carried out (Brożek, 2008, p. 195).

– \( P_1 \) (the environment should be protected by law) \( \rightarrow m \neg P_{\text{park}} \);
– \( P_2 \) (everyone has freedom of action) \( \rightarrow m P_{\text{park}} \);
– If with the Weight Formula \( P_1 > P_2 \rightarrow m \neg P_{\text{park}} \).

5 First problem: random weighting outcome

Despite its undeniable interest, the partial reducibility thesis poses several problems. The first and most intuitive concerns the choice of the principles that stand behind the rules governing similar cases. Albeit constructed as a simplified model, the thesis seems to disregard the fact that different principles may be available to back the rules that sustain similar cases. This is immediately relevant for two reasons: because it shows that the choice of principles is more complex than it seems and, mainly, because the final result depends on the principle brought to the weighting.

– Car (c) case: rule ‘cars are not allowed into the park’ is backed by \( P_1 \) and or \( P_3 \);
– \( P_1 \): ‘the environment should be protected by law’;
– \( P_3 \): ‘physical integrity is inviolable’;
– bicycle (b) case: rule ‘bicycles are allowed into the park’ is backed by \( P_2 \);
– \( P_2 \): ‘everyone has freedom of action’;
– the legal question is still: are motorcycles (m) allowed into the park?;

12 On the ‘collision rule’ (law of competing principles), see for instance Alexy, 2002, p. 54; Pino, 2010, pp. 190ff.
13 Of course, nothing prevents there being more than one principle on each side of the question, requiring an extended ‘Weight Formula’ (Alexy, 2002, p. 409; Sieckmann, 2010, p. 110). However, the point is that, using balancing, analogy becomes dependent on a dubious choice among principles (threatening the consistency of the outcome of the analogy).
if interferences of $P_1$ in $P$, and in $P_3$ are different (how motorcycles cause pollution and how they can damage physical integrity), the weighting result can differ;
- hypothetically: $P_1 > P_2 \rightarrow m \neg P$ park, but $P_3 < P_2 \rightarrow m P$ park.

6 Second problem: analogy covered by balancing

Elaborating on the previous point, the partial reducibility thesis also seems to disregard the fact that principles chosen to carry out the weighting process are materially connected with the factors used to compare cases: each principle within the balancing describes a factor for the cases selected in the phase of similarity. Therefore, not only does the choice of a principle describe the selection of a factor, but, furthermore, the balancing process is merely set out as a scheme to organize the choice of the decisive factor. Hence, this leads to the claim that balancing is used here only as a tool for determining the meta-factor: among the factors selected by the principles chosen, balancing only decides which one of them will prevail. Under cover of balancing, a proper analogy is performed.\textsuperscript{14}

- For $c$, $b$, and $m$: $f_1$ pollution, $f_2$ freedom of movement, $f_3$ danger to pedestrians;
- $P_1, P_2, P_3$ represent $f_1, f_2, f_3$;
- $P_1$: ‘the environment should be protected by law’; in $f_1$: $m = c; m \neq b$;
- $P_2$: ‘everyone has freedom of action’; in $f_2$: $m = c; m = b$;
- $P_3$: ‘physical integrity is inviolable’; in $f_3$: $m \neq c; m = b$;
- selection of $P_1$ and $P_2$ means that the ‘main factors’ are $f_1$ and $f_2$;
- if $P_1 > P_2$, than the decisive factor is $f_1$: $m = c; m \neq b$;
- $P_1 \rightarrow f_1 \rightarrow m = c$.

7 Third problem: balancing irrelevant principles

Taking into account that, under the partial reducibility thesis, the replacement of the similarity phase is achieved by balancing principles that

\textsuperscript{14} Since balancing, in its proper sense, only decides which norm will be applied to a case among all those applicable, it becomes clear that, when it is used to select one of several distinct inapplicable norms for a case, balancing merely defines proximity and distance between the case and each one of the inapplicable norms.
support rules that are inapplicable to a case, another problem arises: the principles called upon by these rules become irrelevant. In fact and in spite of similarity, there is nothing to ensure that these principles are not irrelevant for the unregulated case, in which case they would be unable to justify any solution. The main reason for this result comes from the inapplicability of one of those principles to the case requiring an answer, which follows from the fact that features describing that case do not match the principle's antecedent. Under this scenario, principles called upon in similarity do not play any role here. This leads to the following claim: the partial reducibility of analogy to balancing only works if the unregulated case, in spite of similarity, is analogous to the regulated case to the point that it triggers exactly the same principles as those backing the rules whose application by analogy is being considered.

- Car (c) case: rule ‘cars are not allowed into the park’ is backed by \( P_1 \);
- \( P_1 \): ‘the environment should be protected by law’;
- bicycle (b) case: rule ‘bicycles are allowed into the park’ is backed by \( P_2 \);
- \( P_2 \): ‘everyone has freedom of action’;
- new similarity case: can a memorial tank (mt) be allowed into the park?
- no norm for allowing a memorial tank (mt) into the park;
- under similarity, nothing has changed: question is still the permission to enter;
- balancing between \( P_1 \) and \( P_2 \) for mt is meaningless: at least, \( P_2 \) is irrelevant;
- the unregulated case does not fulfil the antecedent of \( P_2 \).15

8 Fourth problem: not enough principles for balancing

The obstacle for the partial reducibility thesis that underlies the previous problem can be extended to all normative situations in which the rules that govern similar cases are not based on any principle or, probably most often, when those rules are supported by the same principle. In these situations, balancing is not possible for the simple reason that there are not enough principles playing any role in the case at hand. It is known that balancing

15 This is even more clear if the original principle is used as \( P_2 \): ‘people are entitled to rest actively’ (Brożek, 2008, p. 194). It seems undeniable that in any circumstance allowing the memorial tank into the park can be an instance of resting actively.
is an operation used to solve normative conflicts unsolvable by norms for conflicts: for that reason, balancing requires two or more norms. Therefore, when cases are backed by the same principle, no balancing can take place.

- Rule 1: ‘car circulation is restricted to three days per week’;
- rule 2: ‘plates with an even first digit, Mondays, Wednesdays, and Fridays’;
- rule 3: ‘plates with an odd first digit, Tuesdays, Thursdays and Saturdays’;
- no rule was enacted for the few cars whose licence plates begin with a letter;
- even-first-digit (e) case: rule 2 is backed by $P_1$;
- odd-first-digit (o) case: rule 3 is backed by $P_1$;
- $P_1$: ‘the environment should be protected by law’;
- legal question: when can cars whose licence plates begin with a letter circulate?;
- balancing is unusable: $P_1$ backs both rules: no normative conflict exists.

The background problem: analogy and balancing do not match

All the problems with the partial reducibility thesis identified so far are, in a sense, no more than a consequence of a larger one: analogy and balancing do not match. This becomes rather clear when we take into account the fact that each one of these basic operations demands the opposite normative circumstances: while analogy depends on the absence of an applicable norm, balancing relies on the applicability of two or more norms. Based on their reverse opportunity, this opposition points towards mutual exclusion: a case requiring an analogy does not call for a balancing, and vice versa.

- Case: ‘motorcycle ($m$) entrance into the park’;
- normative circumstances of analogy: no norm on $m$;
- normative circumstances of balancing: about $m$, $P_1$, conflicts with $P_2$.

The probable explanation for the overlap between analogy and balancing, notwithstanding their mutual exclusion, seems to be in a reductive understanding of the role played by principles as effective regulating norms. Acceptance of principles as norms like all others, which is an inevitable
consequence of their deontic character, has to imply that they govern cases in the same way as rules do. None of the particular features of principles, especially not their ability to be applied in various degrees, would interfere with the fact that they provide legal solutions as well: if a case fulfils the antecedent of a principle, then there is a legal consequence for that case. It is obvious that, if this principle conflicts with another, the solution becomes dependent on their balancing. However, once there is a weighting outcome, a final consequence is obtained and there is no room for the introduction of an analogy.

– Legal question: are motorcycles allowed in the park?;
– \(P_1\): ‘the environment should be protected by law’;
– \(P_2\): ‘everyone has freedom of action’;
– motorcycle entrance is an instance of: \(P_1\) and \(P_2\);
– no norm on ‘car entrance into the park’;
– no norm on ‘bicycle entrance into the park’;
– legal solution is obtained through balancing \(P_1\) and \(P_2\).

The reductive understanding of the role played by principles as effective regulating norms turns out to affect, then, the proper comprehension of what a gap is. If it still represents an absence of regulation, its extension must consider that both principles and rules are in the same way providing legal consequences, even though principles, bearing expansive antecedents which cover larger amounts of reality, considerably narrowed the space for unregulated cases. For the application of law, thus, no gap exists if the case is an instance of a principle antecedent: if it triggers a rule, the rule is applicable, but if it ‘only’ triggers a principle, the case is legally foreseen as well and, with or without balancing, the principle has to be applied.\(^\text{17}\)

– Legal question: are motorcycles allowed in the park?;
– \(P_1\): ‘the environment should be protected by law’;
– \(P_2\): ‘everyone has freedom of action’;
– motorcycle entrance is an instance of \(P_1\) and \(P_2\);
– rule: ‘cars are not allowed into the park’

\(^\text{17}\) But surely without analogy, as its normative circumstances are absent. This explains why some forms of alleged analogy cannot be considered as such (for instance, Verheij and Hage, 1994, p. 65; also with a reductionist approach, Kaptein, 2005, p. 502). Naturally, in what regards the concept of a gap, only normative gaps are relevant here (on the difference with axiological gaps, Santiago Nino, 2003, p. 281; Rodriguez, 2000, p. 152).
– rule₂: ‘bicycles are allowed into the park’;
– legal solution is not achieved by analogy;
– legal solution is still obtained through balancing \( P_1 \) and \( P_2 \);
– legal question: are cars allowed in the park?;
– legal solution is given by rule₁.

It seems that what is meant by ‘gap’ has significantly changed pursuant to the distinction between principles and rules and, consequently, to what follows from the ‘optimization requirement’ character of principles.\(^{18}\) If one accepts that both principles and rules stipulate legal consequences, and thus that both are capable of solving cases in the very same way, the extension of ‘gap’ now has a range that seems to cover only two normative situations: (i) the unlikely situation in which no norm is applicable to a case, whether it is a rule or a principle, and (ii) the situation in which a rule, barring the applicability of principles, has a consequence that has not been specified for a category that, among others, also belongs to its sphere.\(^{19}\) If these normative situations define what can enter into the extension of ‘gap’, it follows that the basic operation of analogy is confined to such situations.\(^{20}\)

– Case₁: circulation of cars whose plates start with a letter;
– gap situation₁: if case₁ is not covered by any rule or any principle (gap₁);
– gap situation₂: with an unspecified consequence for case₁; for instance:
  – rule₁: ‘car circulation is restricted to three days per week’;
  – rule₂: ‘plates with an even first digit, Mondays, Wednesdays, and Fridays’;
  – rule₃: ‘plates with an odd first digit, Tuesdays, Thursdays, and Saturdays’;
– no rule was enacted for the few cars whose plates start with a letter (gap₂).

\[10\] A final remark

Analogy is goal-oriented: no choice among comparison factors, particularly at the level of similarity, can be carried out except in view of some purpose.

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\(^{19}\) The point here is to claim that normative gaps only exist at the level of rules if rules created the gap or at the level of principles if any one is applicable (Manero, 2005, p. 123).
\(^{20}\) All this presupposes that analogy, as an operation adopted to create a decision-norm not enacted by the normative authority, depends on a norm allowing its use under a specific condition and that this condition is the existence of a gap.
Without some such purpose, the meta-factor deciding which factor prevails is indefinable and, for this reason, the choice among factors lacks justification and becomes a strictly arbitrary option. Since principles provide, on a larger scale and more perceptibly, the ends adopted by the legal order, and since these ends are usually introduced in analogy in order to solve the meta-factor problem, the goal-oriented character of analogy has found in this kind of norm its main source of operability. However, principles behave here under a double condition: as ‘end-providers’ and, while giving direct solutions for cases, as ‘gap-decreasers’. This duplicity should be treated carefully: whenever principles govern a case, they immediately exclude analogy and leave no space for them to be used as criteria by which similarities are established.

About the author

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