Errata for Patty, “Arguments-Based Collective Choice”

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The set of links, and the notation for links in general

The definition of the set of all possible links is given on page 386 as

$$T = P \cup R \times R \cup A.$$

This is incorrect. Each link can be expressed as a pair, either

- an initial invocation of a principle (p, r) where $p \in P$ is a principle and $r \in R$ is the first reason in this argument;
- (r, r), the link between one reason and the next; or
- (r, a) where r is the final reason and $a \in A$ the action being advocated.

Hence the set of all possible links is

$$T = (P \times R) \ \cup \ (R \times R) \ \cup \ (R \times A).$$

Alternatively we can use notation given later in the same paragraph: $\phi(p)$ denotes the set of links beginning with principle p; $\tau(a)$ is the set of links connecting to a final action a, and $\tau = \cup_{a \in A} \ \tau(a)$ is the set of all terminal links. If we add the similar notation $\phi = \cup_{a \in A} \ \phi(a)$ as the set of all initial links, we have equivalently

$$T = \phi \ \cup \ (R \times R) \ \cup \ \tau.$$

Throughout the paper, finally, the set of all links is sometimes referred to by $t \in L$, such as “all $t \in L$” for “for some $t \in L$. Actually L is the set of all arguments, each of which takes the form $L = (p, r_1, \ldots, r_m, a)$ where $m \geq 1$ is the “length” of the argument. You can safely just regard the notation $t \in L$ as a shorthand meaning any *adjacent pair* of elements in the list that makes up L.

Situations

On p. 387 we find the following: “I denote an arbitrary model by $\gamma = (N, A, R, P, u, c)$ and the entire set of such games with finite N, A, R, and P by Γ. Similarly, I denote the set of links induced by a situation γ by $T(\gamma) \ldots$.” The terms “model” and “game” are hardly ever used in the rest of the paper, and “situation” is used almost exclusively; the latter receives no special definition other than in this sentence. Thus a situation γ is analogous to a game or, more precisely, to an entire argument-based social choice problem.

Individual stability

The expression defining individual stability, in Definition 1 p. 392, has missing characters. It should read:

$$\bar{c}(L) + u_i(a(L)) \geq 0.$$

(Remember, an individual will want to bear the cost to break a link only to prevent an action that would result in $u_i(a) < 0$, and then only provided the cost is not too large. So the signs in the corrected definition are correct.)

Proposition 9

The example that constitutes the proof of Proposition 9 is all messed up. It should

- omit $c(s, y) = 0$ entirely;
- omit $c(s, z) = 10$ entirely—there is no s or z in this example at all; and
- for the last two utility values, given as $u_2(x) = -2$ and $u_2(y) = -2$, replace u_2 with u_3.

Example 21

Example 21 (p. 408), the utility values for x and y of one player should be reversed, so that each player likes a different outcome. Then the example goes through as given.

Minor typos

- On p. 403, line 3 of main text, $u_i(b) \geq 0$ should read $u_i(a) \geq 0$.
- In the example that makes up the proof of Proposition 15, at the very top of p. 402 in the first line of the matrix, the number under r_2 (representing $c(p, r_2)$) should be 0 instead of 5. Otherwise, there will be additional individually stable arguments other than L_{3x}, L_{4x}, L_{3y}, and L_{4x} listed below, which could be constructed by beginning the argument with $(p, r_2, \ldots)$.