This paper explores neutral blocking in harmony systems—a process where a segment halts but does not initiate harmony—and the challenge such patterns pose for Modified Contrastive Specification (MCS; Dresher, Piggott & Rice 1994; Dresher 2003, 2009). The MCS approach, in keeping with the Contrastivist Hypothesis (Hall 2007, Dresher 2009), proposes that harmony processes can only trigger or target contrastive features, which are defined via feature scope within successive binary divisions of a language’s sound inventory. The relative feature ordering within the hierarchy is assumed to be language-particular. This architecture predicts harmony systems should display broadly two behavioral types (i): segments are either neutral (invisible/transparent)—dominated by some feature [T] outside the scope of and underspecified for the harmony feature [H]—or harmonic (visible triggers/targets)—dominated by and therefore specified either [+H]. The MCS approach has had considerable success in accounting for harmony and neutral harmony variation along these lines, even among closely related languages with very similar sound inventories (e.g. Dresher 2013, Mackenzie 2016, Hall & Hall 2016, etc.). However, given the strict link between phonological contrast and visibility/activity in (i), visible but non-participating harmony targets (neutral blockers) are not predicted in this model and have been explained away on a case by case basis as the result of additional restrictions on locality, trigger-target similarity, or other orthogonal limitations on the harmony process (cf. Nevins 2010, Godfrey 2012, Ko 2013, Dresher & Nevins 2017). I argue this missed generalization is not a shortcoming of MCS per se, but a by-product of binary feature theory which rules out contrastive non-specification; that is, for the MCS approach phonologically visible but inactive segments. I propose neutral blockers represent exactly such contrastive non-specified segments which due to inventory asymmetries are unpaired with respect to the harmony feature and therefore non-alternating. This is a straightforward prediction of privative contrastive feature hierarchies.

A practical illustration is provided by Khalkha Mongolian, which displays perseveratory labial harmony with neutral high vowels (Svantesson et al. 2008)—triggers are underlined in (2). The harmony patterns in (2a) and /i/-transparent patterns in (2b) show that non-local harmony is permitted in Khalkha (e.g. poor-ig-o, *poor-ig-e) which is blocked by word-medial /u/ in (2c). /u/ is visible to labial harmony—and should therefore be contrastive for the harmony feature according to the schema in (i)—but it does not condition harmony itself and therefore is not obviously specified for [labial] (e.g. og-uɮ-ɮe, *og-uɮ-ɮo). This is a contradiction to the predicted harmony typology in (i) and poses a considerable challenge for MCS and other underspecification approaches to harmony.

(2) Khalkha labial harmony and neutral harmony patterns

a. /o, e/ labial harmony

\begin{align*}
    xɛɛtʃ-ɮɛ & \bullet xɛɛtʃ-ɮo \quad \text{‘decorate’-DPST} \\
    cʰʊʊɹ-ɮo & \bullet cʰʊʊɹ-ɮe \quad \text{‘decrease’-DPST} \\
\end{align*}

c. /u/-neutral blocking

\begin{align*}
    xɛɛtʃ-uɮ-ɮɛ & \bullet xɛɛtʃ-uɮ-ɮo \quad \text{‘decorate’-CAUS-DPST} \\
    og-uɮ-ɮɛ & \bullet og-uɮ-ɮo \quad \text{‘give’-CAUS-DPST} \\
\end{align*}
I argue for a version of MCS which incorporates insights from the Parallel Structures Model of feature geometry (Morén 2003, Iosad 2017). In comparison to binary contrastive hierarchies’ simple dichotomy between visible (active) and invisible (inactive) harmony segments in (1), privative contrastive feature hierarchies as diagrammed in (3a) provide a ternary distinction (cf. Hall 2007, 2009; Iosad 2017); distinguishing non-contrastive underspecified transparent segments, contrastively specified triggers, and contrastively non-specified targets. Inventory shape—derived by co-occurrence constraints—determines whether targets are viable (alternating) or non-viable (non-alternating) recipients of harmony, represented here by opaque [×] specifications. For example, /u/ is necessarily non-alternating in a language like Khalkha which does not distinguish labial and non-labial high vowels (i.e. /u/→*ɯ/). Whether /u/ is transparent, a harmonic trigger, or a neutral blocker comes down to the language-particular feature categorization (3a). In this case, /u/ is categorized as non-specified with respect to the harmony feature—as evidenced by its inability to trigger labial harmony (2c)—but it does have an empty labial place node as evidenced by its visibility to labial harmony. In other words, it is a harmony target which because of inventory asymmetries cannot undergo harmony, resulting in neutral blocking.

(3) Harmony typology within privative contrastive feature hierarchies

(a) Privative harmony schema

Each predicted harmony behavior type is demonstrated in (4) using a simple derivational feature-spreading mechanism. Given the simplified inventory /i, o, u, e/, the harmony patterns in (2) indicate the feature ordering [coronal] > [labial] > [closed] for Khalkha. Eligible triggers/targets are determined by class nodes with rightwards [labial] spreading between labially specified and non-specified segments. Labially underspecified segments like /i/ are invisible to the harmony process. The viability of targets /e, u/ to receive and further spread [labial] comes down to differences in inventory shape. Unmarked /e/ is paired with and visible to all other features while labially unpaired /u/ (phonologically *[labial, closed] segments not being permitted) neutrally blocks [labial]-feature spreading.

(4) /i/-transparency and /u/-neutral blocking in Khalkha labial harmony

This approach illustrates that with the right representations the central tenets of the MCS method can accommodate neutral blocking without additional grammatical restrictions on the harmony process. More broadly, these revisions provide a more robust representational harmony methodology which makes more concrete the roles which inventory shape and language-particular feature categorization play in phonological patterning.