If we are going to represent entailments in a suitable relevant logic, we will need to supply intuitive characteristics that such logics are expected to have. The Relevance Condition on the sentential logic L, [viz. for all formulae $A$ and $B$, if $\vdash A \rightarrow B$ then $A$ and $B$ share a variable] provides a weak condition ensuring that antecedents and consequents of entailments contain some common content. To better characterize entailments we need to strengthen or add to this condition to bring out further features of entailment. In an earlier paper Brady [1], the concept of depth relevance was introduced and used to define the Depth Relevance Condition, a stronger relevance condition that picks out a certain group of weaker relevant logics from system $B$ through to $DR^d$, including $DW$ and $DJ$. This syntactical condition has a certain intuitive appeal and the object of this paper is to develop a semantics which is based on this condition and which accentuates its intuitive features. This semantics, which we will call hierarchical semantics, will overlay the Routley-Meyer semantics (cf. [8], pp. 298-302), which is used to capture systems satisfying the Relevance Condition.

To restate this earlier work, we give the concept of depth, define the Depth Relevance Condition, and present the key logics in the group from $B$ to $DR^d$. We consider formulae $A$ with connectives $\neg$, $\&$, $\vee$, and $\rightarrow$, and inductively define the depth of occurrences of subformulæ within $A$.

(i) The subformula $A$ of the formula $A$ is of depth 0 in $A$.
(ii) If $\neg B$ is a subformula occurrence of depth $d$ in $A$, then this occurrence of $B$ is of depth $d$ in $A$.
(iii) If $B \& C$ is a subformula occurrence of depth $d$ in $A$, then these occurrences of $B$ and $C$ are of depth $d$ in $A$. 

(iv) If \( B \lor C \) is a subformula occurrence of depth \( d \) in \( A \), then these occurrences of \( B \) and \( C \) are of depth \( d \) in \( A \).

(v) If \( B \rightarrow C \) is a subformula occurrence of depth \( d \) in \( A \), then these occurrences of \( B \) and \( C \) are of depth \( d + 1 \) in \( A \).

That is, the depth of an occurrence of a subformula in a formula \( A \) is the number of nested "\( \rightarrow \)"s required to reach the subformula, starting with \( A \). We will introduce the expression \( d(B, A) \) to represent the depth of \( B \) in \( A \), where \( B \) is a specific subformula occurrence within \( A \).

The Depth Relevance Condition for a sentential logic \( L \), with formulae constructed as above, can be stated as follows:

For all formulae \( A \) and \( B \), if \( \vdash A \rightarrow B \) then \( A \) and \( B \) share a variable at the same depth in \( A \rightarrow B \), i.e. there is some variable \( p \) with occurrences in both \( A \) and \( B \) such that \( d(p, A) = d(p, B) \) for these occurrences.

The systems \( B - DR^d \) are made up of combinations of axioms and rules chosen from the following:

**Primitives**: \( \sim, \&, \lor, \rightarrow \).

**Axioms**.

A1. \( A \rightarrow A \).
A2. \( A \& B \rightarrow A \).
A3. \( A \& B \rightarrow B \).
A4. \( (A \rightarrow B) \& (A \rightarrow C) \rightarrow A \rightarrow B \& C \).
A5. \( A \rightarrow A \lor B \).
A6. \( B \rightarrow A \lor B \).
A7. \( (A \rightarrow C) \& (B \rightarrow C) \rightarrow A \lor B \rightarrow C \).
A8. \( A \& (B \lor C) \rightarrow (A \& B) \lor (A \& C) \).
A9. \( \sim \sim A \rightarrow A \).
A10. \( A \rightarrow \sim B \rightarrow B \rightarrow \sim A \).
A11. \( (A \rightarrow B) \& (B \rightarrow C) \rightarrow A \rightarrow C \).
A12. \( A \lor \sim A \).