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One aspect of multidimensional arrays that often confuses novice C programmers is that these two ways to represent multidimensional data are not compatible with each other—they are different types, and cannot be implicitly converted from one to the other. In fact, if you try to explicitly convert from one to the other (via a cast), you will get results ranging from nonsensical answers to your program crashing. This common problem underscores the importance of knowing the *exact* meaning of the types that you declare, and *fully* understanding the semantics of every line of code that you write.

Problems arise when a programmer naïvely inserts a cast to "fix" a compiler error without understanding the implications of what he is doing—the program crashes; far worse consequences are possible. Recall that a program which gives the wrong answer (with no indication that something went wrong) is often far worse than a program that crashes. It is possible that we could instead read or write values that we did not intend to, and produce bogus results.

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