```
double average();
```

Is this practice legal? [p. 192]

A: Yes. This declaration informs the compiler that `average` returns a `double` value but provides no information about the number and types of its parameters. (Leaving the parentheses empty doesn't necessarily mean that `average` has no parameters.)

In K&R C, this form of function declaration is the only one allowed; the form that we've been using—the function prototype, in which parameter information *is* included—was introduced in C89. The older kind of function declaration is now obsolescent, although still allowed.

Q: Why would a programmer deliberately omit parameter names in a function prototype? Isn't it easier to just leave the names? [p. 193]

A: Omitting parameter names in prototypes is typically done for defensive purposes. If a macro happens to have the same name as a parameter, the parameter name will be replaced during preprocessing, thereby damaging the prototype in which it appears. This isn't likely to be a problem in a small program written by one person but can occur in large applications written by many people.

Q: Is it legal to put a function declaration inside the body of another function?

A: Yes. Here's an example:

```
int main(void)
{
  double average(double a, double b);
  ...
}
```

This declaration of `average` is valid only for the body of `main`; if other functions need to call `average`, they'll each have to declare it.

The advantage of this practice is that it's clearer to the reader which functions call which other functions. (In this example, we see that `main` will be calling `average`.) On the other hand, it can be a nuisance if several functions need to call the same function. Even worse, trying to add and remove declarations during program maintenance can be a real pain. For these reasons, I'll always put function declarations outside function bodies.

Q: If several functions have the same return type, can their declarations be combined? For example, since both `print_pun` and `print_count` have `void` as their return type, is the following declaration legal?

```
void print_pun(void), print_count(int n);
```

A: Yes. In fact, C even allows us to combine function declarations with variable declarations:

```
double x, y, average(double a, double b);
```