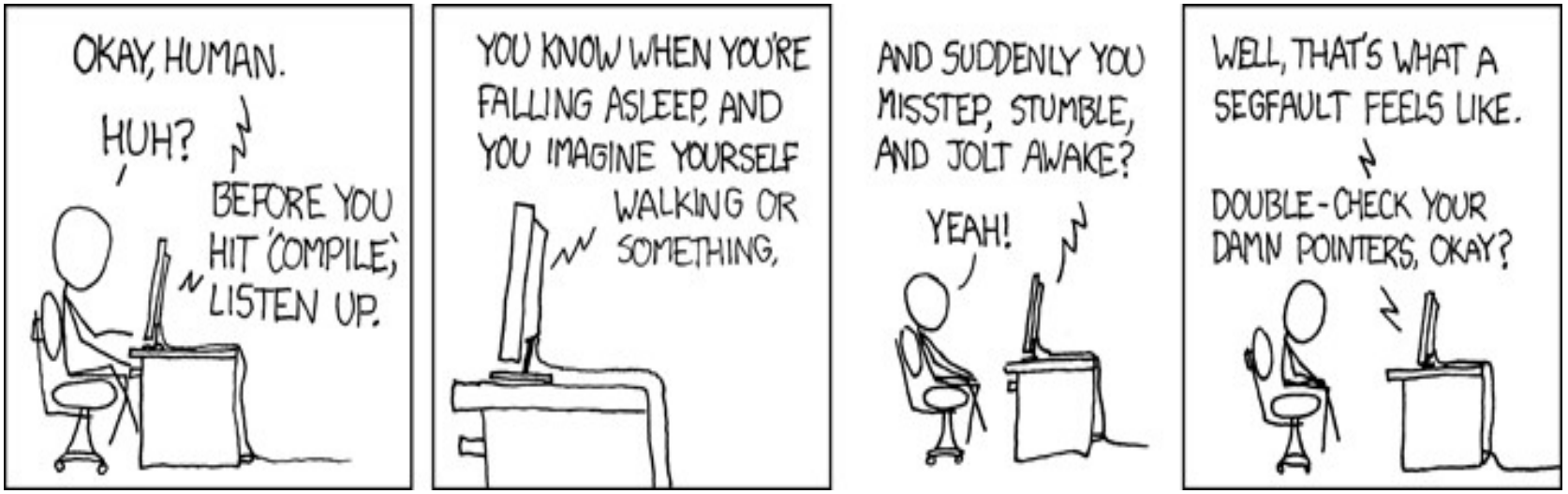
C++ Pointers (this->Part III)



(https://xkcd.com/371/)

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When a member function is called, how does C++ know which object it was called on?

```
class Simple {
private:
    int m_nid;
public:
    Simple(int nid) { //Ctor
        set_id(nid);
    }
    void set_id(int nid) { m_nid = nid; }
    int get_id() { return m_nid; }
};
```

```
int main() {
    Simple csimple(1);
    csimple.set_id(2);
    cout << csimple.get_id();
}
```

// How does a compiler know which object called set_id(2) when it only passes one input argument (int nid)?

What you see vs what the compiler sees

- set_id(2) takes one argument.
- csimple.set_id(2);
- void set_id(int nid) {

  m_nid = nid;

  }

- set_id(2) actually takes two arguments: (2 and address of the object &csimple).
- set_id(&csimple,2);
- void set_id(Simple* const this, int nid) {

  this->m_nid = nid;

  }