Puzzle of the Day

The program *sendmail* is a message transport agent; that is, it moves mail from one host to another. It also logs each use in the *syslog* file. One day, I observed the following entries:

```
Oct 28 06:14:08 nob sendmail[18680]: setsender: /dev/null: invalid or
      unparseable, received from nob.cs.ucdavis.edu [128.120.56.105]
Oct 28 06:14:15 nob sendmail[18680]: GAA18680: /bin/sed... Cannot mail
      directly to files
Oct 28 06:14:51 nob sendmail[18680]: GAA18680: from=MAILER-DAEMON, size=18,
      class=0, pri=30018, nrcpts=1, msgid=<199610280614.GAA18680@nob>,
      proto=SMTP, relay=nob.cs.ucdavis.edu [128.120.56.105]
Oct 28 06:14:52 nob sendmail[18682]: GAA18680: to=nobody, delay=00:00:44,
      mailer=local, stat=Sent
```

The next entry was:

```
Oct 28 06:14:52 nob sendmail[18682]: GAA18681: to=<decode>,
      from=</dev/null>, delay=00:00:44, mailer=prog, stat=Sent
```

1. What is suspicious about the first set of *syslog* entries? What do you think the author of the first mail message was trying to do? Did it work?
2. Given that the *decode* address passes a message to the *uudecode*(1) program, which turns a text file into a binary, sets permission modes as indicated in the mail header, and installs it where the mail header says, does this entry indicate a problem? Why or why not?
3. What fundamental problem do these illustrate?