In this last module, I want to give you a few last tips for your very,final draft. Before you send something off to your editor or to a journal, there's a checklist that you should go through once the pros is sounding good.,There are a few other things that I want to make sure you check before you submit your final draft.,You should check for consistency, and in particular, for numerical consistency.,You also want to make sure that your references are not what I call references to nowhere.,I'll talk more about this in a minute.,Checking for consistency means making sure that you don't have things that are contradictory in different places in the manuscript.,This happens often. I was editing somebody's work, and in the method section, they said, we followed participants for a minimum of two years.,But in the result section, they said that the follow up time, the average follow up time, was one and a half years.,Clearly, the average follow up can't be one and a half years if the minimum follow up is two years.,So this was an inconsistency. Maybe they meant to say that they had a maximum follow up of two years, or that they aimed to follow participants for two years.,But if a reviewer or editor sees this kind of inconsistency, it raises a lot of red flags.,I see numerical inconsistencies a lot when I'm reviewing papers, E.G.,I've seen a lot of papers where the abstract reports different numbers than the body of the paper.,This may result from sloppy cutting and pasting, or because authors redo an analysis, but maybe they forget to update the entire manuscript.,I was reviewing one paper where the numbers in a table and figure should have been identical, but they didn't match.,So I suspected that the authors had more than one version of their data set running around.,If you can't keep track of your dataset, that makes me worry about the whole analysis.,So you want to make sure that your basic numbers match throughout your paper, otherwise it raises all sorts of red flags.,The final thing to check carefully is your references. You want to make sure that you don't have what I call references to nowhere, this is when the authors cite a reference, ,but when you look up that paper, it does not contain the information that the authors indicated was available there.,I am often checking references for various reasons, such as to track down original sources,, and I have found that the majority, the majority of the time, the reference does not, in fact contain the promised information.,I believe that this is the rule, not the exception.,Oftentimes, others will misinterpret or exaggerate the findings from the original source.,If you go back to the original reference, it turns out that deciding authors were selective in the information that they chose to mention in their paper, ,or authors cite a paper to support a particular statement, but that statement is not, in fact supported by the original reference.,It might be supported in some roundabout way, but not directly.,Another common problem is that citing authors often cite secondary sources rather than original sources.,I call this citation propagation. Maybe Jones and Al does the original study, they come up with an A statistic.,Then Smith Atel wants to cite that statistic, so they cite Jones Atel.,But then Bury Atel gives the statistic in their paper, and instead of citing Jones at all, they cite Smith.,They read the statistic in Smiths paper, so they don't bother to go back to get the original reference.,Then James Edel cites Buryadel for the statistic, and so on.,It reminds me of the game of telephone that children play.,If you're not familiar with that game, that's where children sit in a circle.,The 1st child comes up with a sentence, and they whisper that sentence into the ear of the next child, and then that child whispers it into the ear of the next child, and so forth.,The last child says out loud what they heard.,And it's always something that's garbled and funny and that has little resemblance to the original sentence.,This is exactly what happens in the scientific literature when you cite secondary rather than original sources, you lose important pieces of information down the citation chain, and often things get completely durable erence in the paper.,Using a reference manager program like n NOTE can help avoid that kind of problem.,But here's an example. I was writing about UVC light a few years back, and I was reading a paper, I got to this sentence.,These data are particularly disturbing, as the UVC emission is even larger than ambient sunlight on a mountain.,I was writing for a lay audience, and I thought, great, this is a very easy comparison that anybody can understand ambient light on the mountain.,I wanted to use this comparison in my story, so I needed to go back,to the original references to verify its accuracy.,I also had a question, because when they said it's larger than ambient sunlight on a mountain, they didn't give any timeframe.,Is it larger than the amount that you get in 1 min on the mountain?,Is it larger than the amount that you get in an hour?,So I needed to go back to the original references to get more information.,Well, 1st, I went to Reference 13.,It was a url, but the link was broken.,It brought me to a website, but I got an error message.,I searched all over that website, and I could find no relevant information about UVC emissions on a mountain.,Fortunately, they had given two references, so I still had hope.,So I went to Reference 14, which was a paper.,I scanned through the paper. I did a word search On the paper.,It did not contain the words Amy and Sunlight Mountain, or UVC.,It was a reference to nowhere, because the paper contained nothing to support the author's statement.,I was out of luck. So always a double check your references.,And here is finally, an example of citation propagation, where citations get garbled through the literature like a game of telephone because authors fail to site original sources.,When I was a graduate student, I worked on something called Female Athlete Try It.,One of the components of the triad is disordered eating.,And people would always want to know how common is disordered eating in female athletes. At the time that I was a graduate student in the late 1990s, there was a hallmark statistic that everybody cited.,The statistic was that 15 to 62% of female athletes have disordered eating.,This statistic appeared in every paper on female athlete triad or eating disorders.,And athletes, everybody used this statistic, but everybody cited different sources for this statistic.,At one point, I was trying to trace back to where this statistic came from, and I found about 50 different attributions for the statistic.,Well, obviously that statistic came from somewhere, so everybody was just citing secondary sources.,And I'll just give you some examples.,Um I found it said in the in a paper from Journal of General Internal Medicine.,It has been estimated that the prevalence of disorder eating in female athletes ranges from 15 to 62 %.,While this paper gave two citations, a book from 1996 and a paper from 1996, neither of those is the original source.,The original source is actually from the 1980s.,I'll show you in a minute.,Just another example I found In a fact sheet on eating disorders among female athletes, the prevalence of eating disorders is reported to be between 15% and 62 %.,They cite a book. So again, a secondary source.,In a 2000 review paper in The American Family Physician, uh, they say, ,although the exact prevalence of the female athlete triad is unknown, studies have reported disordered eating behavior in 15 to 62% of female college athletes.,No citation was given there. And then, in a 2004 paper in the Sport Journal, studies report between 15% and 62% of college women engage in problematic weight control behaviors.,They cite a 2000 paper barry.,And how? Well, I actually went and pulled that 2000 paper barry.,And how, and guess what? It doesn't contain any mention of the statistic whatsoever.,So its a reference to nowhere.,Not only is it not the original source, but it doesn't even talk about the statistic in that paper.,Interestingly, I found the following statement in a 1999 New York Times article, and actually they got the closest to getting this right. They say, but informal surveys suggest that 15 to percent to 62% of female athletes are affected by disordered behavior that ranges from a preoccupation with losing weight to anorexia or bolimia.,Informal surveys is actually right on the money, ,so I know that some fat checker at The New York Times actually went back and found the original source for this statistic publication, ,like the New York Times has a superb fact checking department.,Unfortunately, few scientific journals have fact checking departments to double check sources like this.,Out of curiosity, at some point as a graduate student, I got interested in where this statistic actually came from, ,and I tracked down the original sources, which took some sluthing on my part.,The statistic comes from three papers that were published in the 1980s.,The 15% value comes from a 1987 paper.,The 62% value comes from a 1988 paper.,And in between those, there was a 1980 6% 96 paper that found a value in between 15 and 62 %.,All three studies shared an author, rosen, but noticed that all three studies were from the 1980s,,and this statistic was being 2nd cited decades later.,What's more, if you look carefully at the studies, they are very limited in their design.,These were cross sectional surveys, self report, with no non athlete control groups, and,they weren't random samples of athletes.,They were just convenient samples. The 1986 study surveyed varsity athletes from some Midwestern universities in a whole bunch of sports.,The 1987 study was on nine to 18 year old swimmers at a particular swim camp.,These weren't even college athletes, though sometimes when the statistic is cited, people say college athletes.,And the final study looked at just 42 college gymnasts, so these are totally non representative samples across a wide range of athletic groups, with no controls.,And, um, what the studies considered disordered eating was also poorly conceived and poorly measured.,I don't want to go into a lot of detail, but if you're curious,, there was a wide range in what they were defining as disordered eating, and the definition differed for those three different surveys. Here are a few more details about the findings if you're curious.,But the bottom line is this statistic was widely used as if it was the gold standard.,It was used everywhere in the literature, but it basically had no meaning because it came from studies that were old and that were inherently limited by their low quality design.,So my take a message is you always want to cite the primary source.,Take the time to go back to the primary source.,Don't just cut and paste other authors citations and assume they are correct, because more often than not, those authors have made errors in their sighting.

在最后一个模块中，在你把一些东西发给编辑或期刊之前，我想给你一些关于最终草稿的最后一些小贴士。你应该仔细阅读一份清单。一旦散文听起来不错，我还想确保你检查一下其他几件事。在@@提交最终草案之前，应检查一致性，尤其是数字一致性。你还要确保你的参考文献不是我所说的，是指任何地方。过一会儿我会详细谈这个问题。检查一致性意味着要确保手稿的不同地方没有矛盾之处。这种情况经常发生。我正在编辑某人的作品，他们在方法部分说：“我们对参与者进行了至少两年的跟踪。”但是在结果部分，他们说，随访时间，“平均随访时间为一年半”。显然，如果最低随访时间为两年，则平均随访时间不可能为一年半。所以这是一种矛盾之处。也许他们的意思是说他们最多可以随访两年，或者他们的目标是跟踪参与者两年。但是，如果审稿人或编辑看到这种不一致之处，就会引发很多危险信号。当我审阅论文时，我经常看到数字上的不一致之处。例如，我见过很多论文，其中摘要报告的数字与论文正文不同。这可能是由于剪切和粘贴草率造成的，或者因为作者重做了分析，但他们可能忘记更新整篇手稿。我正在审查一篇论文，其中表格和数字中的数字本应相同，但它们并不匹配。所以我怀疑作者有不止一个版本的数据集在运行。如果你无法跟踪你的数据集，那就让我担心整个分析。因此，你要确保你的基本数字在整篇论文中都匹配，否则它会引发各种危险信号。最后要仔细检查的是你的推荐信。你要确保任何地方都没有我所说的提法。这是作者引用参考文献的时候，但是当你看那篇论文时，它不包含作者所指出的那里提供的信息。我经常出于各种原因查看参考文献，例如为了追踪原始来源，我发现大多数时候，参考文献实际上并不包含承诺的信息。我相信这是规则，而不是例外。通常，作者会误解或夸大原始来源的发现。如果你回到最初的参考文献，事实证明，引用的作者在论文中选择提及的信息是有选择性的。或者作者引用一篇论文来支持特定的陈述，但该陈述实际上没有得到原始参考文献的支持。它可能会以某种迂回的方式得到支持，但不能直接支持。另一个常见的问题是，引文作者经常引用次要来源，而不是原始来源。我称之为引文传播。也许琼斯·阿黛尔做了最初的研究，他们得出了一个统计数据。然后史密斯·阿黛尔想引用这个统计数据，所以他们引用琼斯·阿黛尔的话。但是后来巴里·阿黛尔在报纸中给出了统计数据，他们没有引用琼斯·阿黛尔的话，而是引用了史密斯的话。他们读了史密斯论文中的统计数据，这样他们就不用费心回去找原始参考文献了。然后，詹姆斯·阿黛尔引用了巴里·阿黛尔的统计数据，依此类推。它让我想起了孩子们玩的电话游戏。如果你不熟悉那个游戏，那就是孩子们围成一圈坐的地方。第一个孩子想出一句话然后他们对着下一个孩子的耳边低声说出那句话。然后那个孩子对着下一个孩子的耳边低声说，依此类推。最后一个孩子大声说出他们所听到的话，而且总是乱码滑稽的东西，与最初的句子几乎没有相似之处。当你引用次要来源而不是原始来源时，这正是科学文献中发生的情况。你会丢失引文链中的重要信息，而且内容往往会完全乱码。然后有时候作者只是错过了数字参考文献，或者他们在论文中错误的地方放了正确的参考文献。使用像EndNote这样的参考管理器程序可以帮助避免此类问题。但这里有一个例子，几年前我在写关于UVC灯的文章。我正在读一篇论文，我得出了这样一句话：“这些数据特别令人不安，因为紫外线辐射甚至比山上的环境阳光还要大。”我本来是为非专业观众写作的，我想，太棒了，这是一个任何人都能理解的非常简单的比较，山上的环境光。我想在我的故事中使用这种比较，所以我需要回到原始参考文献来验证其准确性。我还有一个问题，因为当他们说山上的阳光比环境阳光大时，他们没有给出任何时间框架。它是否大于你在山上一分钟内获得的金额？它是否大于你在一小时内获得的金额？因此，我需要回到原始参考文献以获取更多信息。好吧，首先我想参考13。这是一个网址。但是链接被打断了。它把我带到了一个网站，但我收到了一条错误消息。我在那个网站上搜了一遍，却找不到关于山上UVC排放的相关信息。幸运的是，他们给了两份参考资料，所以我仍然抱有希望。于是我去参考文献14，那就是报纸。我翻阅了报纸。我在报纸上搜索了一下。它不包含“环境阳光”、“山脉”或“UVC”字样。它之所以提及任何地方，是因为该论文没有任何内容可以支持作者的陈述。我运气不好。因此，请务必仔细检查您的参考文献。最后，这里有一个引文传播的例子，在文献中，引文会乱码，就像电话游戏一样，因为作者没有引用原始来源。当我还是个研究生的时候，我研究了一个叫做女运动员三合会的项目。三合会的组成部分之一是饮食失调。人们总是想知道女运动员饮食失调有多常见。在20世纪90年代末我还是研究生的时候，每个人都引用了一个标志性的统计数据。统计数据显示，有15％至62％的女运动员患有饮食失调。这一统计数据出现在每篇关于女运动员三合会或运动员饮食失调的论文中。每个人都使用了这个统计数据。但是每个人都为这个统计数据引用了不同的来源。有一次，我试图追溯这个统计数据的来源，我发现了大约50种不同的统计归因。好吧，很明显，这个统计数据来自某个地方。所以每个人都只是在引用次要来源。我只举几个例子。我发现在《普通内科医学杂志》的一篇论文中说：“据估计，女运动员饮食失调的患病率在15％至62％之间。”虽然这篇论文引用了两次，一本是1996年的书，另一篇是1996年的论文。这两个都不是原始来源，原始来源实际上来自20世纪80年代。我过一会儿给你看。再举一个例子，我在关于饮食失调的情况说明书中发现：“据报道，在女运动员中，饮食失调的患病率在15％至62％之间。”他们引用了一本书，所以又引用了次要来源。在2000年《美国家庭医生》的一篇评论文章中，他们说：“尽管女运动员三合会的确切患病率尚不清楚，但研究报告了15％至62％的女大学运动员饮食行为失调。”那里没有给出任何引文。然后在《体育杂志》2004年的一篇论文中：“研究报告称，有15％至62％的大学女性有有问题的体重控制行为。”他们引用了2000年的论文《Berry and Howe》。好吧，我真的去拿了2000年的报纸《Berry and Howe》，你猜怎么了？它根本没有提及这个统计数据。因此，它指的是无处可去。它不仅不是原始来源，而且甚至没有谈论那篇论文中的统计数据。有趣的是，我在1999年《纽约时报》的一篇文章中发现了以下陈述。实际上，他们最接近把这个问题做好。他们说：“但是非正式调查表明，有15％至62％的女运动员受到行为失调的影响，从全神贯注于减肥到厌食症或贪食症”。非正式调查实际上是正确的。所以我知道《纽约时报》的一些事实核查员实际上回过头来找到了这个统计数据的原始来源。像《纽约时报》这样的出版物有一个很好的事实核查部门。不幸的是，很少有科学期刊有事实核查部门来仔细检查这样的来源。出于好奇，在研究生的某个时候，我对这个统计数据的实际来源产生了兴趣，我找到了我进行一些侦查的原始来源。该统计数据来自1980年代发表的三篇论文。这15％的值来自1987年的一篇论文。62％的值来自1988年的一篇论文，介于两者之间，1986年的一篇论文发现该值在15％至62％之间。这三项研究都有一个共同的作者罗森，但确实注意到这三项研究都来自20世纪80年代，而这一统计数据是在几十年后被引用的。更重要的是，如果你仔细观察这些研究，它们的设计非常有限。这些是横断面调查，自我报告，没有非运动员对照组，也不是运动员的随机样本。它们只是方便的样品。1986年的研究对来自中西部一些大学的大学运动员进行了大量体育项目调查。1987年的研究针对的是特定游泳训练营的9至18岁的游泳运动员。但是，有时候，当人们引用这个统计数据时，他们甚至不是大学运动员。最后一项研究只针对42名大学体操运动员。因此，在没有对照组的广泛运动组中，这些样本完全没有代表性。而且，该研究认为饮食失调的内容也构思不周，测量也很差。我不想详细介绍，但如果你好奇的话，他们对饮食失调的定义差异很大，这三项不同的调查的定义也有所不同。如果你好奇的话，这里有更多关于这些发现的细节，但最重要的是，这个统计数据被广泛使用，好像它是金本位一样。它在文献中随处可见。但它基本上没有意义，因为它来自陈旧的研究，这些研究本质上受到低质量设计的限制。所以我带回家的信息是，你总是想引用主要来源。花点时间回到主要来源。不要只是剪切和粘贴其他作者的引文并假设它们是正确的，因为这些作者的引文往往犯了错误。回溯原始来源并正确处理。