The
Oneonta Convivium
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The Oneonta Convivium Committee is pleased to announce that the publication is back, with some changes.

We have changed our name from “Collected Essays” to “Proceedings.” The name change reflects the change in presentations. Since the last volume, we have had presentations that included an original short story reading, and a vocal musical presentation. We look forward to the day when we will have visual presentations as well. We also hope in the future to be able to include those in our publication.

We have also changed our name from the “Oneonta Faculty Convivium” to the “Oneonta Convivium” because our presentations are not limited to faculty presenters. We regularly have student presenters, and we would welcome appropriate presentations from any college employee.

We have kept the numerical sequence because we want to make it clear that this is a continuation of the prior works. Our last publication was volume XIII (dated: 1996–1997, although it included some later materials). These newest volumes represent an accumulation of presentations since that date. Because of the large number of papers, and in order to maintain our format, we have had to issue three volumes (XIV, XV, & XVI). We have tried to contact all presenters from Fall 1996 through Spring 2005 (unless they had already been included). A total of 15 have responded positively, and their works are presented here in chronological order. If we have missed anyone, please contact the Convivium Committee.

The members of the Convivium Committee would like to thank Ms. Sue Nelson & Ms. Katherine Milavec for their ongoing work in organizing the lunches, and Ian Lascell at the Instructional Resource Center for his help and advice in producing these proceedings in printed form. We are also deeply grateful for the continuing support of the College at Oneonta for both the Convivium lunches and the publication of these proceedings.

Robert Rothenberg
For the Convivium Committee
WHAT IS THE CONVIVIUM?

The Convivium Lunches represent opportunities to hear (and perhaps see) what other faculty, students, and staff are doing. We meet for lunch and an informal presentation several times each semester. Presentations may be interesting because the presenters are “doing interesting stuff,” because parts of their work overlap with ours, or merely because it’s a free lunch. We may be entertained, educated, or bored to tears. Sometimes more than one in the same presentation. I have been impressed by the overwhelmingly positive responses we have received.

For the presenters, the experience can also be positive. Most of the presentations are followed by a Q&A session, at which the attendees often make suggestions that provide the presenters with “food for thought” (a particularly appropriate metaphor). The lunches also provide the presenters with a friendly environment in which to present serious research (sometimes in an early stage), and a publication opportunity.

On a personal note, my presentation forced me to rethink a project that I had prepared for a specialized audience (teachers of law), and to make it palatable for a much more general group. Such an exercise brings one’s thoughts into sharper focus, and sometimes suggests questions that would not otherwise occur.

One of the most rewarding aspects of the lunches is the opportunity to hear the student presentations. Since our institution is about the students, it is gratifying to see our efforts “paying off.” Being new to the Committee, I have only attended one such presentation, but both the students were well prepared and enthusiastic. It is unfortunate that we cannot give them more opportunities for such experiences. Finally, one of the most enjoyable opportunities is to see friends and colleagues, and have a few minutes in which to catch up on what has been happening to them since we last met.
An important concern in anthropology and related disciplines today is how to practice a truly postcolonial scholarship, one that no longer supports the powerful over the weak, and, in particular, the power of nation-states or global capitalism over indigenous peoples. Over the past several decades, we anthropologists have become sensitive to our discipline’s colonial past, and accompanying this sensitivity is widespread desire to practice an anthropology that is not hegemonic, and may instead empower indigenous peoples. How to do that is often a topic of vigorous debate and experimentation. We have seen new or renewed emphases on the ethics of anthropological practice, collaboration with consultants’ communities, and multivocality in anthropological writing. I do not intend to argue that all of these explorations are failures or that anthropologists should abandon seeking ways to practice that challenge the status quo of power relations. What I will address is the outcome of one variation of a new postcolonial ethic that requires the scholar to constrain his or her own authority by deferring to indigenous speakers. I do so because I have some relevant experience to share that suggests the results are not what scholars seek to achieve.

No anthropologist wishes to be the type of scholar pilloried in native critiques as a thorn in the native’s side (see, especially, Deloria 1969), even though such critiques are polemics rather than reviews of the complete spectrum of anthropological practice (Lurie 1998). Polemics have their place: they inspire reflection, retrospection, and reform. But some anthropologists do embrace these polemics as accurate histories of their discipline (see, e.g., Biolsi and Zimmerman 1997; Thomas 2000). Such an interpretation of polemical texts may be used to underwrite strongly worded condemnations of colleagues that further polarize the discipline. More that a few young scholars have used polemical native critiques of anthropology as proof of what amounts to the discipline’s ‘original sin,’ which they—as a new generation—will help to confine to the past by implementing a postcolonial ethic.
From this point of view, the only ethical practice is for anthropologists to never challenge or contradict indigenes. If the anthropologist does recognize or suspect inaccuracies or a lack of truthfulness in statements by indigenes, he or she should still not make any statements that publicize the error. Often, the justification given is that indigenes are history’s victims, and they need the tables balanced against dominant institutions of society that holds no distinguishing talent for truthfulness. In practice, then, the truth value of statements made by indigenous speakers are treated as if they always exceed the truth value of comparable or competing statements by non-indigenous persons, including scholars. I wish to question this particular postcolonial ethic. Admittedly, my abstraction risks hyperbole. I am not suggesting that many anthropologists necessarily verbally articulate the proper ethical relationship of anthropologist and indigene in precisely this fashion, but what I am willing to argue is that more than a few practice my abstraction of a postcolonial ethic and are willing to condemn and misrepresent the scholarship and motives of their colleagues who do not. Thus, it is through the evidence of words and acts reasonably consistent with my above phrasing that I allege such an ethic exists.

The basis of my critique is the categorical nature of the ethic, the assumed concreteness of the indigenous slot—indigeneity’s alleged immutability and discreteness—and what trouble such assumed concreteness and categoricalness in practice can cause. The problem is simple: the ethic privileges indigeneity, blanketing the category in cultural capital that overrides all specifics. This reflects a widespread cultural trend. Indigenous identity and culture are in. There is a worldwide run on everything pertaining to indigenous culture and identity. Untold numbers of people are scurrying to find lost indigenous ancestry in their family trees and to reorient their lives around what they interpret as their lost/regained indigenous cultural heritage. This has led to a condition in which successful indigenes may have origins that do not conform to society’s expectations, which are that those claiming indigenous status are the descendants and perpetuators of pre-colonial groups, and history’s colonial victims. The wise observer can never be too sure about what is hiding behind a screen of indigeneity. Who will be hurt by the use of this ethic too often goes unasked, but there is mounting evidence that among those who are harmed by this ethic are other members of indigenous communities.

Although I favor letting indigenous peoples (and everyone else, for that matter) speak for themselves, in one particular project my colleague
Larry Wilcoxon and I have not adopted the always-yield-to-the-indigene ethic. In response, some of my colleagues who perceive themselves as being successful and, perhaps, model postcolonial anthropologists (“Some anthropologists (myself included) generally embraced these changes and have had relatively good relations with Native Americans over the years.”) have cast us among anthropologists whose work allegedly “undermines the efforts of anthropologists working to build relationships of mutual trust with Native American communities” (Erlandson 1998:483).

What did we do to draw such strong criticism? To begin with, we performed a pair of environmental review studies in which we examined the history of cultural values associated with Pt. Conception, California, by people identifying themselves as Chumash. The cultural values are based on stories that state that the souls of the dead leave this world for the afterworld from this location. A number of problems emerged in the data that we collected, some of which we later published, and others we continue to study and write about. Foremost among these was that even though the cultural values associated with Pt. Conception were being expressed publicly as ancient and persistent tradition, all lines of evidence confirmed that the importance of Pt. Conception to living peoples arose in the 1970s as part of an effort to block a major energy-related construction project. That 1970s political event was the turning point that publicly legitimized a change of ethnic identity among certain families from Chicano, Spanish, white, and Californio to Chumash. Physical occupation of the construction site by these “Indian traditionalists” was an effective part of the opposition to the construction project. And yet, it was also clear that for these people, Pt. Conception retains the significance it acquired in those 1970s political activities—it is their sacred place now.

The more disturbing find we made was that although opposition to the 1970s project came from a large and diverse cross-section of the public, anthropologists participating in that event altered historical records and introduced flawed ethnographic data to strengthen the image of persistent traditional indigenous belief and practice. These actions appeared to be contrary to anthropological ethics guidelines regarding research integrity and public truthfulness (see, e.g., American Anthropological Association 1998). Our colleagues’ alleged verification of the claims of neo-Chumash was crucial to the successful legitimization of these people as the most authentic traditional Chumash. In other words, our colleagues had helped create
indigenes without realizing it. The presence of new indigenes created a new problem: there were pre-existing Chumash communities that were none too happy at being outmaneuvered politically by neo-Chumash. These pre-existing Chumash were descendants of the local aboriginal occupants of the region who, in most cases, had maintained a social identity as local Native Americans in several small communities and scattered families. With few exceptions, these communities and families had been identified continuously as local indigenes since colonization of the region. In contrast, the neo-Chumash families have their origins in Spain’s colonization of California in 1769–1820. These were soldiers, their families, and a few other colonists who came to California from what is now northwest Mexico. Contrary to the suggestions of some of our critics, the non-indigenous colonial roots of neo-Chumash families are well-established in the historical literature on Spanish-Mexican California and Chicano history. The families descended from these colonists were demonstrably and publicly content with their colonial ancestry until the late 1960s, when some were receptive to suggestions from local genealogists and historians that perhaps they had local indigenous ancestry as well (Haley 2002, In press; Haley and Wilcoxon n.d.).

Neo-Chumash have had mixed success in establishing themselves as legitimate Chumash. In general, non-Chumash have been more accepting of neo-Chumash identity claims than the old Chumash communities have been. This is significant itself, because certain non-Chumash, especially anthropologists, the press, and local government agencies have a greater influence on public legitimacy than do the old Chumash. Outside interests benefit by having political allies whose public persona is that of assertive local indigenes, so mutually supportive relationships have been nurtured by both parties. The pre-existing Chumash communities, on the other hand, have generally rejected the neo-Chumash, often in harsh terms. Friction began almost immediately in the late 1960s and became public very quickly in the early 1970s (O’Connor 1989). When we interviewed members of the old Chumash communities in 1993, we were still often told that the neo-Chumash are “wannabees.” The contest reappears periodically in the press, though the individual antagonists often change. Neo-Chumash responded to this rejection by claiming an ‘underground Mexican phase’ in their family histories, during which it is claimed they maintained public identities as Mexican while secretly maintaining Chumash traditions. Many neo-Chumash then claimed to be culturally the most “authentic” or “traditional” Chumash. Their impact on popular understandings of Chumash culture
has been significant, and they have appeared in textbooks, television documentaries, doctoral dissertations, and so on as spokespersons for and representatives of “authentic” Chumash tradition.

Their success in convincing anthropologists of the accuracy of their claims of Chumash origins ranks among the most significant neo-Chumash political achievements. These successes come among anthropologists whose specializations lead them to be ignorant of the relevant historical literature and archival sources. Luckily for the neo-Chumash, a strong postcolonial ethic of not challenging indigenes is also present among the anthropologists convinced of neo-Chumash legitimacy. Indeed, the ethic makes it easier for these anthropologists to be duped by neo-Chumash claims and for these errors to compound. Thus, one anthropologist depicts neo-Chumash claims that they “do have documented California Native ancestors” as more authoritative than the social history revealed in records, and makes the added mistake of accepting neo-Chumash descriptions of “problems” with specific records and researchers mistakenly presumed to be the sources of all challenges to their claims (Wilson 1998:496). The combination of accepting neo-Chumash as indigenes plus the belief that it is improper to challenge indigenous statements produces a circularity: because these persons are indigenes, it is inappropriate to look at historical evidence pertinent to their claimed indigeneity. Anthropologists who do so are condemned. For example, one defender of neo-Chumash claims characterized Haley and Wilcoxon (1997) as “inexcusable meddling in Indian politics” (Erlandson 1998:484). This position fails to address the reasonableness of the questions, How did they become Indian?; What makes them Indian?; and, What keeps them Indian? But reflecting awareness of how such questions play out, this critic also offers four different versions of neo-Chumash origins allegedly in the region’s aboriginal inhabitants. Parts of these stories are incompatible with one another, and in any case, none are backed up by research or even passing familiarity with the relevant evidence. Indeed, this critic will not allow himself or anyone else to examine the evidence. Not surprisingly, therefore, the author’s assertions are disastrously in error.  

This willingness to defend neo-Chumash claims as truthful without research as a basis for doing so is reinforced by past personal investment of time and energy to establish oneself as new kind of enlightened scholar claiming a unique moral respect for indigenous self-determination. For their support of neo-Chumash claims, these anthropologists get access to
“traditional” knowledge and indigenous perspectives for their ethnographic studies, and political support for their archaeological or other projects. The situation fits what David Stoll (1999: 277) describes as one in which scholars “insecure about their moral right to depict ‘the Other’… validate [their] authority by claiming to abdicate it.” Indeed, the more “activist” or “radical” the indigenous voices they can abdicate to, the stronger they believe their own postcolonial credentials are (see, e.g., Erlandson 1998: 483, 484; King 1998: 485).

Anthropologists who accept and support the neo-Chumash claims of Chumash ancestry conclude that we must have some unholy reason for challenging an indigenous group, and speculate at great lengths about our motivations. One characterizes our work “as yet another attempt by white anthropologists to divide the Chumash Indian community for their own purposes” (Erlandson 1998: 484). Again, the circularity surfaces: local aboriginal origins are presumed. When Wilcoxon and I criticized another colleague for authorizing an individual’s claims of local indigenous ancestry without researching it first (Field 1999; Haley and Wilcoxon 2000), we received the following rebuttal:

>I don’t think it is the business of anthropologists to play the genealogy card with Native persons with whom they happen to disagree politically. Certainly I know more than a little about the genealogies of those with whom I agree and disagree in the Esselen and Ohlone regions. I have taken my cue from the leadership of these peoples that it is quite inappropriate to use family histories as ammunition for political battles. This is an ethical point I would like to make as I agree collegially to disagree with Haley and Wilcoxon (Field 2000: 273).

I asked this scholar (who does not do research in the Chumash region) what these political disagreements were, but he did not respond. Of greater interest, however, are the implications of this statement for deriving some general ethical principles for anthropological practice. Is it acceptable for anthropologists to publicly support Native claims without checking their accuracy first? Is it acceptable for anthropologists to deceive the public and policymakers as long as Native leaders insist on this course of action? What if the Native group lacks unified leadership? If the anthropologists do not disagree politically with the Natives (and this is certainly applicable to us), can we describe their origins then? What is it about Native-ness that makes it subject to unique ethical principles? Can persons or groups become Native and take advantage of those unique principles?
The American Anthropological Association's Code of Ethics provides some guidance on these questions.\textsuperscript{10} Without going into all possible relevant passages in the AAA's code, it is nevertheless explicitly clear that anthropologists are instructed that “they should not deceive or knowingly misrepresent…, or attempt to prevent reporting of misconduct, or obstruct the scientific/scholarly research of others.” As a responsibility to the public, anthropologists “must be truthful; they are … responsible for the factual content of their statements…. They should make clear the empirical bases upon which their reports stand, be candid about their qualifications and philosophical or political biases, and recognize and make clear the limits of anthropological expertise.” The code makes no mention of unique treatment for persons or groups identifying themselves as Natives or indigenes or their leaders, if there are any; instead, it states “The same ethical guidelines apply to all anthropological work.” Our critic’s position does not appear to conform well to these guidelines, so if he believes the guidelines are flawed he should explain this in detail to his colleagues so that his concerns may be properly considered.

For all the talk among professionals of an ethic of yielding to indigenous voices, the public and policy makers still expect anthropologists to possess empirical, fact-based, objective knowledge about indigenous peoples. Clearly, the AAA expects the same. In validating the claims of neo-Chumash to the public and policy makers, my colleagues are playing to this expectation, and are still claiming to be authorities. If we are correct that neo-Chumash origins and social history from colonization to the present are quite distinct from Chumash origins and social history then the shoe is definitely on the other foot, and those who accuse us of “meddling” in Chumash politics have, in fact, helped to create and sustain replacement Indians who detract from Chumash involvement in the very processes our critics claim to support. The mere possibility that anthropologists may have contributed to the disempowerment of a community through their insistence that they, and we, must blindly yield to and support the most vocal local indigenes requires that we investigate what the facts are. No other option is ethical. More than two decades of complaints from old Chumash communities have raised that possibility. Anthropologists need to respect the public’s expectation that our findings are based on empirical evidence, or else we will surely someday be dismissed by the public and policymakers alike as unreliable.\textsuperscript{11}
Before closing, I must draw attention to some final complexities of indigenous legitimacy in this case. It is easily demonstrated that one or more distinct neo-Chumash communities exist—they are an ethnic group, albeit a new one and one that not everyone considers legitimate. Their recorded history is different from the version they embrace, but that in and of itself does not distinguish them from other cultural groups around the world. Neo-Chumash persons are as sincere in their beliefs and practices associated with Point Conception as other ethnic groups are regarding their own beliefs and practices. And, as the historical record makes abundantly clear, their cultural identity emerged partly as a reaction to their own history of being colonized and subordinated by Anglo Americans. I do not wish to minimize the significance of their own historical experience of discrimination. Nevertheless, all of this ignores significant issues in the case. The neo-Chumash have not been accepted by the old Chumash, who have consistently expressed a strong desire to represent their own interests. Gains by the neo-Chumash come at the expense of the old Chumash, who have on occasion lost the remains of their dead, input in local decision-making, and wage income from environmental monitoring. Anthropologists whose ethical focus too narrowly considers the impacts of their work on a single subject group may miss how other groups may be affected by their actions. When is it ethical to challenge indigenes? One circumstance may be when other anthropologists have systematically misinformed the public and policymakers and show no inclination to recognize or correct their own mistakes, and when their misinformation may be influencing policy in ways that harm other communities or exclude them from full social participation.

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**Notes:**

1 I do not mean to endorse the view that anthropologists historically have always abetted colonial interests, as I think the discipline’s record reveals equally significant reformist and stronger counter-hegemonic strains.

2 I was lucky enough to read Vine Deloria, Jr.’s famous critique of anthropologists as a college freshman, and it helped me enter anthropology with my eyes open to the potential for abuse. It was soon evident to me that Deloria had been selective in his appraisal of anthropology and anthropologists.

3 This essay largely springs from the fallout over Haley and Wilcoxon (1997), which included efforts to block publication of an ethnohistorical research essay that had already passed peer review (Haley and Wilcoxon 1999). Our related works addressing some of the ethical issues raised by this and other cases are Haley (1999a, 1999b, 2002) and Haley and Wilcoxon (1998, 2000). Empirical studies presenting and supporting our interpretations are the afore-mentioned Haley and Wilcoxon (1997, 1999), a manuscript nearing completion (Haley and Wilcoxon n.d.), and Haley (2002, In press).

4 In many jurisdictions, proposed construction projects require specialized studies conducted in advance to determine the proposed project’s environmental and social impacts. Our studies were performed in this context in accordance with U.S. federal environmental and historic preservation laws.
For a demonstration of the continuity of historical Chumash communities, see McLendon and Johnson (1999). Complicating matters regarding Point Conception’s cultural significance, some members of these old Chumash communities have embraced the views originating in the 1970s with the neo-Chumash.


Haley and Wilcoxon (1998:504); for other examples, see Corwin (1987), Bustillo (1996), and Banks (1997).

These versions are as follows: 1) “After decades of being told that their ancestral cultures were wicked, barbaric, decadent, inferior, or extinct, many Native Californians went underground with their cultural identity. They intermarried with others of various racial or ethnic identities, and many denied their Indian heritage to the public, friends, and even family” (Erlandson 1998:478; cf. Haley and Wilcoxon n.d.); 2) “Mission records suggested that one of Madelaine Hall’s ancestors was a Mexican (part-Indian) woman living in Santa Barbara almost 200 years ago who had married an Indian man [Policarpo] of unknown (possibly Chumash or California Indian) origin who probably was not the father of the woman’s child. Who fathered the child is not known, but it is not inconceivable that an Indian woman living among the Chumash after the death of her Indian husband may have borne the child of a Chumash man” (ibid., 482; cf. Northrop 1984:55); 3) “Subsequent research suggested that Policarpo, the Indian “man from the south,” came from Baja, California. His wife, Maria Manuela Quejada, born in Los Angeles ca. 1798, reportedly had three children out of wedlock with Miguel Cordero, a native Santa Barbaran of Mexican descent who was married to a half-Chumash woman. Of the other 11 great-great-grandparents of Madelaine Hall listed by Wilcoxon et al. (1986), two also had a parent whose birthplace was not recorded” (ibid., 482 n. 3; cf. Haley 2002); and 4) “Travis Hudson showed in the early 1970s that Ruiz had Chumash ancestors in his father’s lineage” (ibid., 482; cf. Haley In press).

For more speculation about our motives, see King (1998) and Ruyle (1998).

The Association’s code of ethics is intended to “foster discussion and education. The American Anthropological Association (AAA) does not adjudicate claims for unethical behavior.” AAA is not a licensing association.

While a critique of objectivity may be raised here in response to my proposal, its relevance must be considered in the context of an anthropological praxis that derives from—and plays to—public expectations on the nature of the anthropologist’s task.
Spanish Science Fiction: Towards a Humanized Technology

Elizabeth Small

Foreign Languages & Literatures

[This talk was accompanied by a PowerPoint presentation of illustrations related to technology and Spanish science fiction. Where germane, the slides are described in brackets.]

Thank you all very much for coming. I was really flattered when I was asked to do this; I’ve been very impressed by the previous convivia I’ve attended, and I hope I won’t disappoint you too much.

I got into Spanish science fiction in that awkward period between finishing my dissertation and actually graduating, when I never wanted to read another late-Romantic poet ever again. So I went back to a youthful obsession, science fiction, and I found some written in Spanish, much to my surprise—your surprise too, perhaps? Well, yes, Spanish science fiction! It’s not as renowned as the English-language or Russian branches, since generally Spanish-speaking authors have gone for supernatural rather than technological fantasies. And science fiction is not a mainstream current in Spanish literature, any more than it is in the US, but in this age of the Internet, desktop publishing, and our incredible film technology, it has had a nice little boom, from new publishing houses in Spain, to fanzines (those are non-commercial magazines by and for fans), to websites and cartoons. OK so not all the slides I had up before were science fiction, but they’re funny, and comic books and the whole fantasy art and illustration side of the genre are just as important as written science fiction.

Spanish science fiction does follow the English and American models, sometimes slavishly, but in my opinion the least derivative stories tend to be in the social-criticism vein, heirs of Ray Bradbury, if that helps you place them. This novella, “El orgullo de Dios” / “The Pride of God,” was one of the stories I discussed recently in an article about religion in Spanish science fiction—not that Spanish science fiction completely rejects religion, but the vast majority that mentions it at all, will reject the social-control implications of organized religion. And notice in this drawing, how organic the spaceships are—not metallic-looking, mass-produced machines, not the clean, sterile
products of a totalitarian state. Today’s Spanish science fiction has its roots in the Franco era, when science fiction was censored, and had an underground, subversive edge—the essence of science fiction was inherently at odds with Franco’s traditionalist ideology. Here’s another illustration from a cautionary tale about first contact with another sentient civilization, against which a religious crusade is quickly waged and the alien civilization destroyed. A nice ironic touch on this crusader’s helmet—it says “no matarás” / “thou shalt not kill.”

At the end of the Franco dictatorship, Spanish science fiction makes for an interesting footnote to the process of re-creating the nation’s sense of self. Remember on the original Star Trek series, how the multi-cultural bridge crew was composed? What nationality was the navigator, the weapons control officer, the communications officer? And the captain, of course, was American. Well, in Spanish stories of space exploration (the very few which follow the Trek model), which nationalities would be represented on the bridge? And what role would the Spaniard have? This was going to be the topic of my presentation, and I would have spent twenty minutes showing you that the captains of starships in Spanish science fiction following the Star Trek model, were generally German or American, and the Spaniard was invariably the communications officer. So now those of you who were interested in my original topic won’t go away entirely emptyhanded.

I changed my topic when I learned that Jim Greenberg was reading Ortega y Gasset, a Spanish philosopher from the early 1900’s who had some interesting thoughts on the dehumanizing effects of modernity, and since I’m giving a paper at a conference in April on almost this same topic, I’m really interested in hearing what you all have to say in the discussion afterwards. The question is, what have Spanish attitudes towards technology been? Specifically, can human culture survive our advances in technology? Is technology just a different kind of clothing upon an essentially unaltered human condition, or is it a binding straitjacket that might be good for some things but will ultimately deform and destroy what it seems to protect? This question has troubled Spanish writers far enough back that we can find some of the biggest names in nineteenth-century realist-naturalist prose felt compelled to write science fiction (occasionally).

Take Leopoldo Alas, Clarín, one of the top three or four novelists of the late nineteenth century, who wrote a short story in 1886 called “Cuento
futuro”/“Future Tale,” gathered with many others in this volume [slide of book cover, De la luna a mecanópolis, Antología de la ciencia ficción española, 1832–1913 / From the Moon to Mecanopolis: Anthology of Spanish Science Fiction, 1832–1913]. In Clarín’s story the advances of technology have left humanity so well-cared-for, so sated, so bored and tired of mere existence (since all causes of struggle had been solved), that all humanity decides to commit suicide at the same time. The scientist in charge of the immolation and his wife, Judas Adambis and Evelina Apple, are left alive and naturally find their way to the Garden of Eden. There Evelina does eat of the apple, but her husband refuses and demands a divorce, which he is granted. She is expelled to lonely mortality and he continues to live in Paradise for centuries after she is gone, until he finally tires of his solitude and also leaves to die, so ending the history of mankind, but not the world. Technology is not evil or dehumanizing in this story; it is the ease and leisure that it brings that saps away the will to live. And among the bland sameness of universal well-being, art, poetry and philosophy find no deep dilemmas to consider and human culture dribbles away into meaninglessness. Sound like network television to anyone? No, sorry, it was 1886.

“Mecanópolis” was written by the very famous essayist, scholar and philosopher, Miguel de Unamuno, in 1913. Obviously times had changed and though the horrors of World War I had not yet affected attitudes to technology, that was not far away, and not unforeseen. Unamuno’s great concern was not the ennui of prosperity, it was the loss of human contact as a result of the progressive multiplication of machines around us. In his story a man gets lost in the desert and stumbles upon a train with no visible driver. He gets in and it takes him to a city in which all the living inhabitants have died or fled, all the people, animals, rats, everyone, leaving all the machines on to continue cleaning the streets, creating the industrial products, running the theaters and everything. The man finally loses his sanity when the Mecanopolis newspaper prints an editorial expressing pity for him—the idea of a soulless mechanized civilization drives him to jump in front of a moving streetcar and he wakes back in the desert where he is revived physically and spiritually by the uncomplicated hospitality of a group of Bedouins.

Let’s look at an example of hard science fiction from much later, 1978, which quite directly tackles the subject of how might one design a functioning human society to meet a technological challenge? The problem was the evacuation of a planet, which would become necessary several
generations in the future and then require the whole population to survive another few generations' worth of sub-light speed space travel before arriving at a suitable new home. This novel [slide of book cover El Señor de la Rueda / Lord of the Wheel] creates a retro-medieval society on wheels which meets not only the technological future needs of the planet's people (the rocket engines they will eventually use in space are similar to those powering their castle-cars, etc.), but the non-technological trappings, the humanistic elements of customs, myths and history are designed too, to ensure the people are comfortable with the constant traveling they face. Here a very nice balance between technology and humanity is maintained by the apparently benevolent wisdom of a very few people, the hidden planners. Even more recent works of Spanish science fiction still follow a similar line of mistrusting totalitarian systems and the uses to which they put technology—sort of the "guns don’t kill people, people do" attitude towards technology which finds the roots of amorality in human nature and politics, not in the dehumanizing effect of technology. Of course, it's the technology that enables the total control of these dystopias. But on yet another hand, more advanced technology also means the possibility of more nuanced relations between people and machines—or computers.

Eduardo Gallego and Guillém Sánchez are a pair of authors whose collaborations have been winning them prizes recently. They are both scientists themselves, and that might explain their much more optimistic attitude toward human-cyborg relations, if you will. The story this illustration is from, “Me pareció ver un lindo gatito”/“I Thought I Saw a Pussy Cat,” shows their characteristic comic touch and perforce humanizes the technology since all the human crewmembers have been killed when the story begins, leaving the ship’s computer to be the protagonist and deal with the hostile aliens, aided only and unwittingly, by the ship’s cat (who is not humanized in any way, and none too pleased with events as they unfold) [illustration shows a creepy alien above an annoyed-looking black cat]. In its death throes, the computer spends some time recalling its relationship with the human crew and discerns a pattern of nostalgia for them in its recollections: “It was hard to admit it, but it was nice being around those guys. From the start they took [me] on as an advisor, and not just in scientific matters” (15). This is a self-aware computer, capable of self-sacrifice for the good of humanity—Gallego and Sánchez’s resolution of the tension we’ve seen between humans and our machines relies on making the machines human in every way except their physical circuitry. I won’t go into any more
detail, for lack of time, but the computer does win, and the cat lives happily ever after.

Another Gallego and Sánchez story posits a similarly humanized relationship between people and their computers. In “Dar de comer al sediento”/“Feeding the Thirsty,” a college professor is trying to write a science fiction-fantasy novel for an interstellar science fiction contest not unlike the one this novella won (in the novel it’s the Polyfacetic University of Centaurus; in real life it’s the Polytechnic University of Catalonia). But the character’s novel is so excruciatingly bad that the style-checker in his word-processor keeps interrupting him with comments like, “Do you know the real meaning of the word 'stolid'? Perhaps it’s not the best choice for the protagonist” (203). The style-checker is in automatic mode, and since the professor is working with a pirated copy of the software, he can’t turn the style-checker off. Not that anyone here would relate to his situation, of course not. This novella, like Gallego and Sánchez’s earlier story, features a number of characters who are actually self-aware computer programs, including the style-checker, potty-mouthed viruses and virus-protection mercenaries. It’s a lot of fun and thoroughly lighthearted, but it’s not too unfair to compare this novel to Unamuno’s Mecanópolis, the one with the mechanized city devoid of any living beings. Here it’s the exact opposite: the only really humanized characters, with a very few exceptions, the only ones with a sense of community, compassion and camaraderie, are the computer programs. The ultra-technologized society of human beings in Gallego and Sánchez’s universe is morally bankrupt, vapid, superficial, and utterly soulless.

All the stories I’ve mentioned today point out the modern trend towards asking machines to do what we used to ask of our fellow human beings. A recent New York Times article asked whether time spent in Internet chat rooms can properly be called social interaction, when one’s direct interaction is with Microsoft’s Internet Explorer. And the creators of that interface will make it more or less dehumanizing, but it still is a non-transparent barrier. Gallego and Sánchez do seem to have hit on a point either lost on earlier writers of Spanish science fiction, or perhaps it could only have found its way into works that deal with advanced computers, not the mechanical monsters of the nineteenth century. With the self-aware computer programs in these recent stories, we begin to recognize that we can choose to put our best qualities into our creations, and none or few of the worst. Like the moral rectitude of Asimov’s robots, the ship computer’s valiant self-sacrifice or the
decentralized resilience of our own Internet, technology as it functions in human society may embody important human ideals. But even so, Gallego and Sánchez share with Unamuno and with us now a concern as old as the Industrial Revolution: the danger of a mechanization of society, a loss of poetic and spiritual sensibility, and a loss of human solidarity that permits the application of technology towards atrocities even today.
Comparison of Russian and American Forms of Doing Business

Robert Rothenberg and Tatyana V. Melnikova

Economics & Business

Introduction:

In discussions between Russian and American business faculty, it became clear that there were differences in forms of business organizations (forms) in the two countries. In some cases there were incongruities between forms (e.g.: there is no U.S. equivalent of the Russian Unitary Enterprise with Rights of Economic Management); in others, there were differences in structure or use of similar forms. The authors have written one paper comparing proprietorships, partnerships and limited partnerships, and are currently working on a second, comparing corporations, joint stock companies and limited liability entities. The presentation at the convivium was intended to communicate some of the findings from the authors’ research.

The papers were/are written for lawyers, teachers of business law, and possibly businesspersons. Almost all of the attendees at the convivium fell into none of these categories. Accordingly, it was necessary to first present some of the characteristics of U.S. forms. Then, a brief comparison of interesting differences between the countries would be more meaningful. Due to time limitations, these findings are illustrative rather than comprehensive, and may be superficially stated.

Russian law concerning business entities is largely governed by the Russian Civil Code. This statute applies throughout the Russian Federation. U.S. law concerning forms is created at the State level, and may differ from one State to another. This presentation focuses on U.S. law as exemplified by New York.

Overview of New York law:

In choosing a form for doing business, there are six basic factors to consider:
A. Ease and cost of formation.
B. How to manage the form.
C. Taxation of the profits and losses.
D. Distribution of the profits and losses.
E. Personal liability of the owners of the business.
F. Transferability of interests and/or withdrawal from the business.

In choosing a form for doing business, there are several basic forms that commonly occur:

A. Proprietorship.
B. Partnership.
C. Limited partnership.
D. Corporation
   1. Publicly held.
   2. Closely held.
E. Limited Liability Entities.

A proprietorship is a business owned by one person. It is easy to create (in some cases requiring no formal act) and relatively inexpensive. The owner makes all management decisions, profits and losses are taxed directly to the owner, and all profits and losses belong to the owner. He/she is liable for the business’ debts. A proprietorship may be terminated at the will of the owner, or may be sold by the owner to another. A proprietorship may operate under its own name or an assumed name.

A partnership is a business owned by two or more persons (or other forms - e.g.: two persons, a person and another partnership, a person and a corporation may own a partnership). It is relatively easy to form (although more difficult than a proprietorship) and relatively inexpensive. All the partners make management decisions together (the advantage is greater input, the disadvantage is loss of control). Profits and losses are shared, and each partner is responsible for the taxes on his/her share. All partners are responsible for the debts of the business. (This is a joint and several liability. If a partnership is bankrupt with no assets and $10,000 in debt, any one partner may be personally responsible for the payment of the entire $10,000. He/she may then seek reimbursement from the other partners, but if they have no funds, he/she suffers the entire loss.) Because of
the close working relationship of the partners, and the voluntary nature of
the relationship, a partner’s interest is usually not transferable without the
consent of the other partners. The entire partnership business may be sold to
another party or group.

A limited partnership is a peculiar form in which there are two classes
of partners: those who are full partners and those who are limited. There
are two critical differences: limited partners are not personally liable for
the business’s debts, but this comes at the price of exclusion from the
management of the business. All limited partnerships must have at least one
financially responsible general partner. Limited partnerships are of little
significance in the current business environment. They are generally more
difficult and expensive to form than regular partnerships. Profits and losses
of limited partnerships are allocated to the partners and the partners pay
taxes on them. General partners are personally for the business debts, limited
partners are not. General partners usually cannot transfer their interests
without the consent of the other general partners; limited partners may
transfer their interests to anyone.

A corporation is a different form in that it requires the consent
of government to create. While not legally mandated, proprietorships,
partnerships and limited partnerships are usually managed by the owner
or general partners. Corporations are run by professional managers who
may also be owners (shareholders), but are not required to be so by law.
Corporations are taxed on their profits. When profits are distributed to the
owners (in the form of dividends) the owners pay taxes again. The owners
of a corporation are not personally liable for the debts of the business, and
they may transfer their shares to anyone. One can think of corporations
in three sub classes as shown above. Publicly held corporations include
entities which are recognizable to all of us (IBM, General Motors, etc.) All
the characteristics stated in this paragraph apply to them. A second kind
is the closely held corporation. This can be owned by as few as one person,
but often includes a small group (friends, family unit, etc.) The ownership
of a closely held corporation is often restricted to the group by agreement,
making it harder for shareholders to get out of the business. Shareholders
in closely held corporations are often also involved in the decision making
process. A third sub class is the “S” corporation. This is limited to no more
than 75 shareholders, and pays no taxes at the corporate level. Profits of the
corporation are allocated to each of the shareholders, and they pay taxes on
those profits on their personal tax returns (whether or not they profits are distributed).

Limited liability entities are similar to “S” corporations, but may consist of more than 75 participants. They are created by government charter, and the process is somewhat complex.

Interesting findings about Russian forms:

In general, it is more costly and time consuming to create a form in Russia. The cost to form a proprietorship, for example, is $25 in New York, and about $10 in Russia. However, the average U.S. salary is $2,000 per month; the average in Russia is $100. Thus it takes about 1.25% of a month’s salary to form a proprietorship in New York but about 10% of a month’s salary in Russia. Creating a form in New York takes very little time. Usually one fills out a fairly simple document and files with the County Clerk or Department of State. It can be done by mail in a few days. Creating a form in Russia takes at least a week, often a month or more. It usually must be done in person, and requires multiple trips to one or more offices of government.

Russian forms are subject to an additional burden: they often have minimal capital requirements defined by statute. Thus, for example, a Russian joint stock company must have a capital of not less than $320. No such requirement exists in New York. It is theoretically possible to form a New York corporation with as little as $1.00, or possibly even $0. This amount may sound trivial, but it should be noted that $320 is more than three month’s average salary in Russia. The U.S. equivalent would be more than $6000.

In New York, an individual, or a group could form a business named “Oneonta imports.” Assuming the business were successful, and it were later sold to another individual or group, the first owner could realize a substantial amount of money from the sale of the business’ name and the “goodwill” associated with that name. The successor could then operate its business as “Oneonta imports,” building on the established goodwill without having to create it from scratch. Russian law, however, requires that proprietorships, partnerships and limited partnerships be created in the names of their owners; “assumed names” may not be used. In such a case, the name could not be “Krasnoyarsk imports” but would have to name the owner(s).
the business is subsequently sold, any goodwill cannot be sold, as the identity of the new business would be different. This would seem to deprive the Russian businessperson of a substantial asset. (Joint stock companies and limited liability entities may do business under assumed names in Russia.) The authors believe that businesses in Russia do use assumed names, and do transfer these to new owners, but this process is apparently not within the statutory framework. An open question, for further research, is whether such transfers (since not contemplated by statute) could be enforced in a Russian court. Another broader area for further investigation is to what extent there are differences between Russian statutory rules and Russian practice.

Russian law states that only entrepreneurships and legal entities may form partnerships; individuals who are not entrepreneurships, may not. Thus, if two individuals wanted to form a partnership, they each would have to form an entrepreneurship, and these entrepreneurships would then form the partnership. This entails the payment of three filing fees, and the time necessary for two sets of filings. By contrast, in New York, there are no such limits.

Russian law allows one to be a partner in only one partnership. New York law makes no such distinction. From a practical standpoint, this may not be much of a problem, as partnership may not be the most desirable form to select, however, it does restrict one’s possibilities. Would an individual enter a partnership when he/she might later have an opportunity to enter a different one? While one might think to simply leave the now less desirable partnership, it might be difficult. In some cases, there might even be financial losses involved that would discourage one from leaving. The New York approach is that one can be a partner in any number of partnerships as long as one is able to fulfill one’s commitment to each of them, and none of them represents an improper conflict of interest to any of the others.

Russian law requires a founding contract to create a partnership. New York law requires no equivalent document. As a matter of practice, New York lawyers will recommend that such a document be prepared. But the client, who is often trying to save money, often defers this process until a later time. Often, there is a problem before that time comes. In this regard, while Russian law may be more restrictive, it is, in the authors’ opinions, beneficial.
An interesting aspect of Russian law is the form called “simple partnership.” Having identified all the business “entities” and concluded most of the draft of the first paper, the authors were discussing the small number of partnerships that exist in Krasnoyarsk (only 12). Dr. Melnikova suggested that one reason for this was that Russians would probably opt for simple partnerships instead. “What is that” Prof. Rothenberg asked. “Why didn’t we talk about that before?” “Because it is not an entity” was the reply. One of the things about multi-national research, which makes it interesting, is the need to constantly be on one’s toes to avoid any misunderstanding.

The simple partnership is a form of doing business that, like the proprietorship, is not an entity. It is a relationship that is created by contract. There are no formal requirements: it is not registered, it does not pay taxes or file tax reports, it can be formed without cost and immediately. Because it is not registered, it is invisible and there cannot be a complete count of the number of these in Russia. It seems logical that it is the most popular form of those including unlimited owner liability. New York law has no equivalent.

In Russia, what we think of as a corporation is called a “joint stock company”. Russian law recognizes two kinds of joint stock companies: open and closed. These correlate with our publicly held and closely held corporations. The closed joint stock company’s shares may only be distributed among a select group, and there may not be more than 50 shareholders. Shareholders may transfer their shares, but other shareholders have a priority right. New York closely held corporations have no such restrictions unless they are imposed by the shareholders at the formation of the entity.

In Russia, it is comparatively expensive (about 1/3 of a month’s salary, compared with 7% of a month’s salary), and procedurally complex, to form a joint stock company. There are many documents that must be filed and it could take from several weeks to several months to do so. As in the case of the partnership, joint stock companies must prepare certain documents that New York corporations are not required to prepare. It is usually recommended that they do so, but often, a small group will defer this procedure, often until it is too late. Under Russian law, before a joint stock company can be formed, there must be proof that the charter capital has been paid or contributed. In the case of cash, this proof is a receipt from the bank that money has been deposited into the joint stock companies.
account. In New York, one cannot open a bank account in a corporate name until the charter from the State has been issued. Russian law requires a minimum contribution to form a joint stock company; the equivalent of $3,200 for an open joint stock company and $320 for a closed joint stock company. Using comparative monthly salaries, this would be equivalent to $64,000 and $6,400 respectively. The U.S. author has formed many closely held corporations over the years, few of which have been capitalized in this amount. Most are formed using no-par value shares (a concept which does not exist in Russia), and the assets contributed are usually of minimal value. One could argue whether this requirement is a healthy one or not. Clearly it represents a barrier to entry into the marketplace; on the other hand, it may prevent undercapitalized businesses from being formed and going bankrupt later.

Russian law restricts a joint stock company’s ability to generate funds using preferred stock and/or bonds. New York law imposes no such restriction, but, instead, depends on the marketplace to impose reasonable restrictions. The authors plan, in a future paper, to examine the balance sheets of the “Fortune 500” companies, to determine how many of them would be in violation of Russian law in these areas. Russian law requires open joint stock companies to communicate with their shareholders. The defined procedure is publication in “the mass media.” In the U.S., such communication is usually by annual reports that are mailed to the shareholders.

The management of the Russian joint stock company, compared to the management of the New York corporation is a topic that will also be discussed in a future paper.

Russian law specifically provides for two business entities that exist in American practice, but are not separately defined by law: the dependent business company and the subsidiary business company. The dependent business company is a joint stock company in which another company or participant has more than 20 percent of the voting shares, or a limited liability company in which another company or participant has more than 20 percent of the charter capital. Formation of a dependent business company requires publication in a newspaper that deals with the creation of such entities. However, at the present time, there is no such newspaper. In practice, one would go to the Antimonopoly Board for the city of Krasnoyarsk, and
ask for permission to form the dependent business company anyway. They might grant this, or require publication in some other business newspaper (for example: the newspaper that deals with liquidations, or the one in which the annual report data is published.) The dependent business company is similar to a New York corporation in which another corporation has a “significant influence.” Usually this requires a twenty- percent or more ownership. New York law does not recognize this special situation; accounting practice, however, does.

The subsidiary business company is a business company (joint stock company, limited liability company, or company with supplementary liability) in which another business company or partnership, (the principal), “has the possibility of determining decisions taken by such company.” Under these circumstances, the principal will be jointly and severally liable with the subsidiary. The subsidiary company is not responsible for the debts of the principal, but if the principal has a right to give the subsidiary mandatory instructions, it will be responsible for the fulfillment of such instructions and the results thereof. This is true whether or not the instructions were given. If the subsidiary becomes bankrupt as a result of the actions of the principal, the principal will have secondary liability for the debts of the subsidiary company. In addition, if there are other participants or shareholders in the subsidiary company, they have the right to demand compensation from the principal for damages caused by the principal to the subsidiary company. This is similar to a New York situation in which one corporation has “control” over the activities of another corporation (usually by ownership of a majority of the shares), and can therefore exercise control. New York law does not recognize this as a special situation; accounting practice, however, does.

A uniquely Russian entity is the “company with supplemental liability”. A company with supplemental liability is a company, with one or more founders. The charter capital is divided into shares of a certain size, according to the founding contract. Each participant in such company is secondarily liable (jointly and severally), for additional (supplemental) capital contributions in some multiple (equal for each of them) of their original capital contributions. This multiple must be stated in the founding documents. The company must be designated as a company “with supplemental liability.” In all other respects the company with supplemental liability shall be treated as a limited liability company. This type of entity may be deceptive to the uninitiated. Assume for example that one invests the
equivalent of $1,000 in such an entity with a multiple of three. One might assume that one's supplemental liability is $3,000. However, the statute creates supplemental liability based on the charter capital of the entire entity. Thus, if there are a total of ten participants under similar conditions, each of them could be liable for up to $30,000 of supplemental contributions. (Contributions would be limited by the excess of the debts of the entity over its assets.) A participant in such an entity, who pays more than his/her pro-rata share, would be entitled to recover from other participants, provided they have assets and can be found.

The American limited liability company is a hybrid business form that has the limited liability advantage of a corporation, the single level of taxation advantage of a partnership, and is open to an unlimited number of participants. In Russia, the limited liability company does not have the same tax advantage. It must pay taxes and file reports. (In Russia, the limited liability company must pay and file quarterly.) It is also limited to no more than 50 participants. Despite this, it is the most widespread form of business organization because of the relative simplicity of its formation when compared to the joint stock company. (It is also highly popular because of the limited liability feature.) Just as with joint stock companies, Russian limited liability companies can only be formed after there is proof that part of their charter capital has been paid.

Conclusion:

The business organizations in Russia today are not recent discoveries. They have a history that is hundreds of years old, which was interrupted during the communist era. Through their own traditions, and many years of interaction with businesses in Europe, the Russians have kept up with much of what has happened in the commercial world. Where they have fallen behind, they are rapidly catching up. Russian law is in transition. One former student (now a businessman) commented that Russian business law is like a balance sheet: it tells you the status today, but you know that the next time you look at it will have changed. As Russians have a chance to see the operation of their systems, it seems logical that the pace of transition will decrease, and there will be greater stability.

While there is great similarity between Russian and American entities, there are sufficient differences between them, and even differences among
the same entities, that one should not assume one understands the proper methods to use in the others country. In some cases, the available information may be incomplete or even incorrect. In a recent situation, a Russian business had proposed establishing a U.S. venture. They Russians met with a Russian advisor and decided to form a U.S. partnership. On discussion with an American lawyer, it was quickly decided that this was an unacceptable form of doing business. However, based on the information in the possession of the Russian consultants, their conclusion was reasonable. If considering the formation of a business venture in another country, the advice and counsel of competent and experienced local consultants is imperative.

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MASS BALANCE OF THE TAKU GLACIER, SOUTHEASTERN ALASKA

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Abstract

The Taku Glacier is a temperate, maritime glacier of the Juneau Icefield. Mass balance studies have been conducted here since 1946, showing positive overall volume gains, thereby resulting in the glacier’s continued advance. Since 1890, the termini of the Taku and the Hole-in-the-Wall glaciers have advanced 7 km and 3.2 km respectively. Surface measurements in 2001 show that 2822.22 m$^3$ of water equivalence was retained above the ELA, thus contributing to the long-term positive budget.

Introduction

During the summer of 2001, I took part in the Juneau Icefield Research Program (JIRP). My participation was partially funded by the Student-faculty Grant Program. While involved with the program I studied the annual mass balance of the Taku Glacier. The following is a report citing the field work completed, data collected, the manner by which it was obtained, and post-field season analysis.

Background

JIRP has been conducting an expeditionary and field science program for the past 54 years. During the summer of 2001, thirty students (both graduate and undergraduate) participated in the program conducted on the Juneau Icefield, Alaska, and adjoining segments of the Atlin Lake region on the Alaska-BC-Yukon border.

My goal, determining the annual mass balance of the Taku Glacier and its tributaries, is one of many ways to determine the general regime, or overall health of a glacier. The Taku has eight primary tributaries and two terminus tongues (the Taku and Hole-in-the-Wall) (figure 1).
The analysis of mass balance of a glacier is determined by the measurement of water volume that enters a glacial system as snow compared with that which is lost via melting, or the difference between the net snow accumulation and the net ice loss over one year.

The Taku Glacier is a temperate, maritime glacier that has been advancing since 1890 (Pelto et al., in progress). Since this time advances of more then 7 km at the Taku terminus, and 3.2 km at the Hole-in-the-Wall terminus have occurred (figure 2). This glacier is the largest fed by the Juneau Icefield (Pelto and Miller, 1990), with a drainage basin of 824 km². Studies of the Taku's mass balance are continual from 1946 to present, with previous terminus locations being determined by photo and early survey work.

When examining the mass balance of a glacier there are three important zones; the equilibrium line altitude (ELA), the zone of ablation, and the zone of accumulation. The ELA is an elevation, at which ablation and accumulation are equal on an annual basis. The zone of ablation is an area, located at all elevations below the ELA. Ablation is the result of numerous processes including melting, evaporation, wind erosion, and calving (Martini et al., 2001). The zone of ablation is characterized by the loss of a greater volume of water/snow than was added in the past year. The zone of accumulation is the area of a glacier located at higher elevations than the ELA. At these elevations annual accumulation exceeds ablation.

The mass balance of a glacier is controlled by three main factors; 1) amount of ablation and ice loss at the terminus, 2) the percentage of the glacier’s total area within the maximum accumulation area (MAA), and 3) the accumulation area ratio (AAR). The AAR is the percentage of a glacier’s total area above the ELA, this area is the focus of this paper. Currently a grounded terminus and lack of calving creates a greater dependence on the AAR and MAA values (Pelto and Miller, 1990). Surface balance is determined almost solely by climate in areas where calving is not a significant factor in volume change (Pelto, 1989).

Mass balance calculations from the 2001 field season indicate an AAR of 86% and an MAA of 82% (with 1000–2000 m representing the Maximum Accumulation Area). The threshold values for a low calving glacier to retain its terminus location without retreat are 67% and 50%, AAR and MAA respectively (Pelto and Miller, 1990), any values larger than these will
result in an overall advance. Since the values from the Taku are above the threshold and have been for most of its recorded history, it is reasonable to assume that advance will continue, barring changes in calving activity etc. Appendix I contains a sample of the field data obtained at pit locations.

**Mass Balance Measurement Methods**

In the accumulation zone a series of snow test pits were dug within the vicinity of several permanent field camps on the Taku Glacier. The mass balance measured in this study is a surface balance, a number of additional techniques have been implemented in recent years, helping to reduce and better understand the sources of errors inherent in our field techniques (Pelto and Miller, 1990).

Access to the pit locations was gained by hiking and cross-country skiing, in addition to logistical support provided by helicopters. A total of thirteen snow pits were completed, with nine located within the drainage basin of the Taku, each measuring 2 meters by 3 meters, and ranging in depth from 4.7 to 8.0 meters.

Once the pit is completed a ladder is hung on a sidewall of the pit, thus allowing samples to be extracted through the vertical cross-section of the pit wall (figure 3, photo). A coring device, with a known volume, is used to extract snow/ice from the wall of the dug pit. These samples were weighed, and their density ($\rho$) determined (Equation 1). While coring, all samples are removed from the southern wall (north facing walls) of the pit, this minimizes inherent problems resulting from the influence of solar energy causing ablation.

**Equation 1). $\rho = \frac{\text{Mass}}{\text{Volume}}$**

Since mass balance measurements are made annually, it is important to identify the surface along which snow/ice changes from thus marking the boundary between this year’s residual accumulation and last year’s summer surface. Various characteristics are implemented in identifying this boundary:
• Presence of a dirty layer, as a result of dust and other fine debris being introduced by winds originating down glacier
• Relic undulations, wind-rippled surfaces or sun-cups a result of surficial ablation
• Unusually thick ice stratum
• Increase in density, a consistent density of .7g/cm³ was considered last year’s accumulation
• Presence of depth hoar, very loose granular snow/ice grains, generally found below a very dense layer (Miller, 2001)

Each pit is different and a combination of these and other techniques may be necessary to determine the horizon of contact between this year’s and last year’s accumulation.

Structures in the Ice Column

General increases in density occur with greater depth, as a result of pressure and recrystalization. In addition, ice lenses, laminae, ice columns and continuous ice layers are also very often present.

These four structures are the result of meltwater percolating downward through the snowpack, eventually refreezing and forming horizontal structures (Pelto et al., in progress). Ice lenses are layers that can be seen in the vertical cross-section, however, they are not continuous on all pit walls. If these layers are continuous on all pit walls they are denoted as continuous ice layers. Laminae are continuous or non-continuous layers that possess recognizable fine layers, as the result of differing densities or ice grain size. Finally, ice columns are vertical columnar structures that ranged in diameter from 3 cm to 15 cm, and 5 cm to nearly 200 cm vertically.

While making mass/density measurements it was important for us to keep the core centers equidistant from each other, regardless of the presence of these structures. Actually, it is important to incorporate these structures just as a typical snow core, as these ice structures are a part of the internal accumulation.
Limitations of Methods and Data

Although this study did not target errors of field methods or data obtained during a surficial mass balance study, it is important to mention them. 1) The density of measurements averages 1 per 79 km$^2$, as only nine pits were located within the 824 km$^2$ drainage basin. 2) Measurements are only taken from locations above the ELA. 3) Measurements were carried out by several researchers. 4) Error in studies arises from the inability to conduct studies at the beginning and conclusion of the ablation season (Miller, 2001).

Annual Balance Calculation

Since measurements were not taken continuously through the entire snow column, rather at a 10cm increment (figure 4, photo), the summation of our data will yield only a portion of the total volume present. To account for voids between samples, each vertical cross-section is divided into 10 cm “slabs” (each slab represents 10 vertical cm and the width of the coring device). Within each slab is a core measurement (yielding a mass and therefore a density), this value will be representative for the entire slab thickness. Dividing the density of the core ($\rho_c$), by that of water ($\rho_w$ =1), and then multiplying by the slab thickness ($t_s$), the water equivalence is determined for each slab. The sum of these values will result in the entire cross-sections water equivalence ($b_s$). These formulae are shown by Equations 2 and 3.

Equation 2). \[ \frac{\rho_c}{\rho_w} t_s = b_s \]

Equation 3). \[ \sum b_s = b_z \]

Partially based on work by Pelto and Miller, I have divided the drainage basin into six zones based on elevation (0–750 m, 750–1000 m, 1000–1250 m, 1250–1500 m, 1500–1750 m, and 1750–2000 m) (Pelto and Miller, 1990). The 0–750 m range represents the zone of ablation, although the ELA is still under investigation I have used 750 m as a representative ELA. This means that 750–2000 m represents the zone of accumulation.

The annual balance ($b_n$), the sum of the products of the mean annual balance ($b_z$), average water equivalence of pits within a given range, and the glacier surface area ($a_z$) within each 250 m elevation zone of the Taku, ($a_t$)
is the total glacier area (Pelto and Miller, 1990). Glacier surface areas were determined using a 97% area graph, and based on Pelto and Miller’s 1990 drainage basin map (figures 5 and 6). Equation 4 is used to calculate the annual mass balance.

**Equation 4).** \( b_n = a_z \left( \frac{b_z}{a_z} \right) \)

An example of the values used in 2001 calculations is found in Appendix I. All measurements were obtained above the ELA, thus all calculations in this paper deal with positive values.

Figure 7 shows calculations from the Taku dating back to 1946. The summation of annual \( b_n \) values results in a positive value of 13.82 m (excluding 2000 values). This value is thought to be the major factor causing continued advance, over the last century.

**Calculation Results**

In a typical annual mass balance study, the volume of water retained above the ELA and the volume below the ELA that is lost would be determined. However, this study looks only at values above the ELA. Equation 5 was used to determine this value.

**Equation 5).** \( \Sigma \left( b_z \right) \left( a_z \right) = B_p \)

The calculated \( B_p \) value for 2001 is 2822.22 m³, meaning that 2822.22 m³ of water was retained above the 2001 ELA.

Unfortunately, I am unsure how this number compares with calculations from the past years, as I am not considering the volume lost from the glacial system.

**Acknowledgements**

I would like to thank the Oneonta Student-Faculty Grant Committee and The Foundation for Glacier and Environmental Research for their financial support helping make this research project feasible. In addition, I would like to thank Dr. P. Jay Fleisher for his guidance and patience while performing post-field analysis.
References


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Figure 1: Base map of the Juneau Icefield

Figure 2: Advance at the terminus of the Hole-in-the-Wall and the Taku termini since 1890

Figure 3: Photo of student taking a core from the wall of a test snow pit

Figure 4: Photo of pit wall after samples have been removed at 10 cm increments

Figure 5: Map depicting the area within elevation ranges

Figure 6: Table containing area, mean annual balance, bn values, pit locations and pit elevations

Figure 7: ELA and bn values for the Taku Glacier, 1946–2001

Appendix 1: Example of data obtained at all pits within the Taku drainage basin
Figure 1:
Map showing the Taku Glacier drainage basin, Pelto and Miller, 1990.
Figure 2:
Diagram depicting the terminus of the Taku and the Hole-in-the-Wall Glaciers at various times in the past. Since 1890, the Taku has advanced 7 km and the Hole-in-the-Wall has advanced 3.2 km, Pelto and Miller, 1990.
Figure 3:
Student taking core from pit wall.

Figure 4:
Vertical cross-section of a pit wall after coring is complete. Each core is 10 cm apart from each other.
Figure 5:
Map of area at elevations of 750 meters and above. Dark Green (750–1000m), Blue (1000–1250m), Light Green (1250–1500m), Red (1500–1750m), and Orange (1750–2000m). Based on figure 1, Pelto and Miller, 1990.
Figure 6

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<th>% of Area (km²)</th>
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(4) = Clutter base area within the given range. (5) = The mean annual balance. (6) = The total water content. (7) = Percentage of the water content.

Table: Water Balance

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<th>Range (m)</th>
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<th>% of Area (km²)</th>
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Note: The table details the water balance at different ranges and the corresponding areas and percentages.
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<th>$b_n$ (mm)</th>
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Figure 7:
ELA and $b_n$ values for the Taku Glacier, 1946–1999, from Pelto et. al., in progress.
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*Depth from which no field data were collected. However, values of water equivalence are extrapolated from values above and below. A- Depth in cm from snow surface, B- Adjusted mass, obtained by subtracting weight of sample bag, C- Continuous ice layers, ice lenses, laminar, and ice columns present within the vertical column, D- Unadjusted mass, including the weigh of sample bag, E- Water Equivalence, density times 10cm sample increment.

Appendix 1
In fact, precisely at this transitional point of its nightly roll into darkness the great and particular glory of the Egdon waste began, and nobody could be said to understand the heath who had not been there at such a time. It could best be felt where it could not be clearly seen its complete effect and explanation lying in this and the succeeding hours before the next dawn; then, and only then, did it reveal its true tale. (The Return of the Native 4)

In this passage from the 1878 edition of the novel, Thomas Hardy, with carefully wrenched syntax, described the paradoxical conditions necessary for discerning the heath’s “true tale,” as if in daylight it were invisible, but in darkness its “great and particular glory” would be revealed. Yet in the 1912 Wessex edition, Hardy revised “reveal” to “tell,” changing the process from revelation to discourse and the mode of knowledge from unmediated access to the real to mediated representation. In presenting the process by which characters succeed and fail at discerning “true tale[s],” Hardy offers readers a similar mode of access to the “true tale[s]” of his novels, which refigures the act of reading in terms of impression formation.

Equating the heath’s “complete effect and explanation” with its “true tale” is critical to the notions of the true and to their discernment in the novel. The “true tale” is not to be mistaken for truth nor the “complete effect” for completeness. The tale’s truth lies in the fullness of its effect, drawing together both thought and feeling, under conditions of partial visibility which limit knowledge. The passage is devoid of specific detail, but offers instead a comprehensive and suggestive impression of the heath. The failure of the eye to see clearly enhances feeling and activates imagination in the narrator who becomes more open to the possibility of the “glory” of the “waste.”

The “true tale” is created in its telling, existing in that moment, although discerned in time by means of its distinction from other tales. Hardy’s “true tale” expands the boundaries of narrative beyond formulaic beginnings, middles, and endings by virtue of its discontinuous, varied,
and recursive nature. The “true tale” leaves impressions of strangeness and incongruity that, in turn, provoke readers/observers into attempts at demystification. It leaves strong, unforgettable memories in characters and readers by virtue of its aptness, its vividness, and its power to engage the emotions. The moving effect of the novels’ “true tale[s]” subjects to question received concepts both of truth as linked to visible evidence and of narrative as a linear sequence.

My study demonstrates the significance of the impression as the main mode of storytelling in Thomas Hardy’s fiction. Although Hardy’s literary technique suggests parallels with Impressionist painting, I show how his concern with the visible has less to do with recording what the eye sees than with the eye’s propensity for error, with the actual and figuratively blinding effects of light and obscurities that leave observers dependent upon other senses and faculties. The suggestive impression contrasts with certain knowledge, which is all but unattainable in Hardy’s novels. Hardy remarks that, “We don’t always remember as we should that in getting at the truth, we get only at the true nature of the impression that an object, etc., produced on us, […]” (Florence Hardy, Later Years 9).

The novels depict changing modes of impression formation in rural England during a time of transition from the 1830s to the 1880s. Raymond Williams describes the dynamics of change in Dorset, Hardy’s birthplace and the region memorialized as Wessex in his novels:

Thomas Hardy was born a few miles from Tolpuddle, a few years after the deportation of the farm labourers who had come together to form a trade union. This fact alone should remind us that Hardy was born into a changing and struggling rural society, rather than the timeless backwater to which he is often deported. (197)

Wessex society is marked also by both a residual orality and a developing literacy. This shift from oral to literate knowledge redirects attention from the world to the written text, isolating the individual from the environment and the text from the original voice, and increasing reliance on sight to the exclusion of the other senses.

According to Eric Havelock, the shift away from orality is accompanied by an intellectualism in which a “‘true’ mental act of knowing” begins to take
precedence over the “oral act of feeling and responding” (115). Anne Carson elaborates upon these effects in *Eros the Bittersweet*, concluding that “oral cultures and literate cultures do not think, perceive or fall in love in the same way” (420). She describes the shift which accompanies growing literacy:

As the audiotactile world of the oral culture is transformed into a world of words on paper where vision is the principal conveyor of information, a reorientation of the perceptual abilities begins to take place within the individual [...]. Reading and writing require focusing the mental attention upon a text by means of the visual sense. As an individual reads and writes he gradually learns to close or inhibit the input of his senses, to inhibit or control the responses of his body, so as to train energy and thought upon the written words. (43–44)

As a counter to their own literariness, Hardy’s novels persistently draw attention to that which is unavailable to sight and foreground voice in the telling and discerning of the “true tale.” Permeated with the sense of loss associated with historical change, Hardy’s work moves beyond loss to draw attention to the linguistic effects associated with advanced literacy. For it is the novels’ carefully crafted language that opens to readers the mind of an author whose perception, memory, and imagination transform the ordinary into the extraordinary, give substance to the immaterial, and voice to the silent.

Hardy compresses two distinct, but equally valid possible ways that Gabriel Oak “knew” Bathsheba Everdene in *Far From the Madding Crowd* (16). Upon unexpectedly encountering the “handsome,” “dark-hair[ed]” Bathsheba a second time, “Oak knew her instantly as the heroine of the yellow waggon, myrtles, and looking-glass: prosily as the woman who owed him twopence” (4, 5, 16). A close reading of Gabriel’s recognition of Bathsheba underscores a mode of knowledge that is critical to Hardy’s literary impressionism; namely, that Gabriel’s assigning to her the abstract category of “heroine” is particularized in the images of the story about her in which he participates through experience, memory, and imagination. In other words, the possibility of fixing her in an already fabricated category is partly undermined and partly enabled by attention to particularity, diversity, and change.
The passage raises fundamental questions about the nature of Gabriel’s perceptions and of the language in which they are cast. Paradoxically, the reader’s impression of Gabriel and his ways of knowing is formed upon that which is not properly Gabriel’s—the narrator’s articulation of Gabriel’s impression of Bathsheba—an impression that, for the reader, discloses as much or more of Gabriel and the narrator than it does of Bathsheba.

In Gabriel’s brief moment of recognition, the juxtaposition of the cluster of images with the “fact” about Bathsheba throws the two clauses into a relationship that draws attention to the differences which distinguish them, dictated primarily by the use of “prosily” in the second clause with its implications for knowing Bathsheba “poetically” in the first clause. By pointedly not using “poetically” to complete the opposition, the narrator urges the reader to reread the text, to interpret this absence as meaningful, and to recognize both the constructed nature of the opposition and the limitations automatically imposed by the artificial, but useful classification scheme.

The use of the adverb suggests that difference lies in how rather than what Gabriel knows. Gabriel’s acts of remembering and forgetting shape his image of Bathsheba in conjunction with his romantic idealization and playful imaginations. His emotionally charged vision, however, is tempered by his seemingly “factual” account, and the two together epitomize Gabriel’s understanding.

The novelty of the “handsome” Bathsheba’s surveying herself in a “looking-glass” from atop a “waggon” filled with an odd assortment of her belongings captures Gabriel’s attention and creates a vivid impression of her. The narrator clarifies the subjective nature of all impressions, including that of Gabriel:

In making even horizontal and clear inspections we colour and mould according to the wants within us whatever our eyes bring in. Had Gabriel been able from the first to get a distinct view of her countenance, his estimate of it as very handsome or slightly so would have been as his soul required a divinity at the moment or was ready supplied with one. Having for some time known the want of a satisfactory form to fill an increasing void within him, his position moreover affording the widest scope for his fancy, he painted her a beauty. (16)
Gabriel’s vision of Bathsheba grows out of his own romantic predilections and his unfulfilled desire, which lead him to see her as a “beauty” in spite of, or because of, his having had no “distinct view” of her. His impression demonstrates the selection and imaginative altering of that which the eye sees in accord with individual predisposition and constitutes a vision of Bathsheba rather than a precise, empirical observation. Gabriel’s desire for a “heroine” combined with his memory of Bathsheba and the objects around her lead him to form an impression, which appears suddenly as a compelling vision evoking Bathsheba’s presence without actually portraying her.

Hardy transforms images of flowers, conveyance, and mirror, linking them to the undepicted “heroine” to transcend the ordinary and move the reader to take pleasure in this strange, but fitting impression. The withholding of detail about the novel’s characters marks Hardy’s writing style, as he engages the reader’s attention by failing to satisfy the desire for knowledge, by playing on the reader’s curiosity, and by using language to stir imagination—strategies that lead readers to experience feelings similar to those of the novels’ characters. This constellation of images leaves readers feeling as if they know Bathsheba even if they cannot describe her.

The impression asserts its verity in terms of an emotional logic that, nevertheless, requires the grounding offered by the “factual” account for its believability, the truth of which is convincing at first glance. Yet, this seemingly indisputable “fact” about Bathsheba is one selected by Gabriel from among others in the telling of her tale, the accuracy of which is put into question by the subjective nature of his vision. Bathsheba both is and is not the “woman who owed him twopence.” Her failure to acknowledge Gabriel or her debt to him suggests a lack of obligation on her part as if in her own estimation she owes him nothing, and, therefore, cannot be like “the woman” to whom the second clause refers. The “fact” reveals a partial truth, that money was received from Gabriel by Bathsheba, but as to whether the money is perceived as a gift or a loan cannot be clearly discerned in the absence of Bathsheba’s view of the matter.

Paradoxically, the truth of the first clause is felt to be greater than that of the second because it renders Bathsheba’s complex nature more memorably and more completely, if less certainly. Gabriel’s subjective impression of her, the emotional truth of his vision, which is based upon his seeing her rather than simply imagining her, has the convincing force of genuine emotion.
absent in the second clause. The memorable quality of the constellation of images contrasts with the relative insignificance of the narrative of “fact.” The first clause forms a mini-saga that neither describes nor informs, but accomplishes the tale’s telling through rendering in Gabriel’s impression. Bathsheba’s significance, an intangible measure of her substance, finds more truthful expression in Gabriel’s subjective, imaginative response than in the “objective,” but less substantial “fact.”

Hardy writes in the “General Preface to the Novels and Poems,” which introduces the standard Wessex Edition, published in 1912:

Positive views on the Whence and the Wherefore of things have never been advanced by this pen as a consistent philosophy. Nor is it likely, indeed, that imaginative writings extending over more than forty years would exhibit a coherent scientific theory of the universe even if it had been attempted—of that universe concerning which Spencer owns to the “paralyzing thought” that possibly there exists no comprehension of it anywhere. But such objectless consistency never has been attempted, and the sentiments in the following pages have been stated truly to be mere impressions of the moment, and not convictions or arguments. (xii)

In these introductory remarks, Hardy both acknowledges and counters prevailing views of the impression’s provisionality and its competition with “convictions and arguments” in terms of truth-telling ability. I have shown how the impression renders the effect of truth in the telling and discerning of “true tale[s]” by means of which the author’s personal vision is shared with readers through the novels’ characters, including the narrators. For those who read or reread Hardy’s preface after reading the novels, the passage assumes the appearance of strategically placed understatement—an oxymoron that slightst Hardy’s mode of storytelling and (like the oxymoronic phrase “true tale”) joins contraries to provoke wonder in readers, whose impressions of Hardy’s novels linger in memory as testimony to the power of the texts’ language. Hardy’s strategy of self-effacement points to his achievement without reveling in it. By deflecting attention away from himself, Hardy graces his work with that touch of sublimity which transforms self-expression into great art and ordinary lives into extraordinary tales.


