

Panofsky agonistes: The 1950 loyalty oath at Berkeley

John David Jackson

In 1949–51 the University of California was seriously damaged by a loyalty-oath controversy. Wolfgang Panofsky, a promising young physics professor at Berkeley, was caught up in the turmoil.

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Wolfgang K. H. Panofsky, second son of Erwin and Dorothea Panofsky, was born in Berlin in 1919 and grew up in Hamburg, where Erwin, a world-famous art historian, was a professor. From the moment Adolf Hitler came to power in January 1933, Jews at German universities were under threat. Dismissed almost immediately from his university position, Erwin seized the opportunity in 1934 to accept a dual visiting appointment at Princeton University and New York University and settle his family in Princeton. A year later, he was given a permanent position at the then new Institute for Advanced Study.

When Wolfgang was 15, he and his 17-year-old brother Hans entered Princeton—underage Wolfgang initially on probation. Pief, as he was named by his fellow undergraduates who couldn't cope with "Wolfgang," excelled in his studies and graduated in 1938 "with highest honors."¹

At 19 Pief moved to Caltech for graduate work in physics. A teaching assistant with a heavy teaching load, he began research on x rays with Jesse DuMond and completed his PhD in 1942. Upon graduation he married DuMond's daughter Adèle and stayed on at Caltech, teaching evening classes to military personnel and doing classified war research under DuMond on acoustic devices for measuring the proximity of bullets to their target. Some of that work came to the attention of University of California, Berkeley physicist Luis Alvarez, who co-opted Pief as a consultant to the Manhattan Project at Los Alamos. There Pief developed shock-wave calibrators for Alvarez that would be used to measure the yields of the Hiroshima and Nagasaki atomic bombs in 1945.

Berkeley

Returning to Berkeley after the war, Alvarez planned to build a linear proton accelerator from surplus radar gear. He enlisted Pief to join him as a research assistant at Ernest Lawrence's Radiation Laboratory in early 1946. In June of that year, Raymond Birge, chair of the Berkeley physics department, recommended Pief for appointment as an assistant professor (one-third time), with the remainder of his salary paid by the Rad Lab. Birge waxed enthusiastic in his letter to President Robert Gordon Sproul: "Dr. Panofsky is, in our opinion, one of the most promising, if not the most promising young physicist of his age in the country."²

After just two years, Pief was recommended for associate professor. Birge's promotion package contained his own

letter and supporting letters from Alvarez, Lawrence, and Edwin McMillan. In Birge's history of the department,² he quotes Alvarez's letter in full and parts of his own. Here are extracts to give a flavor of Alvarez's letter:

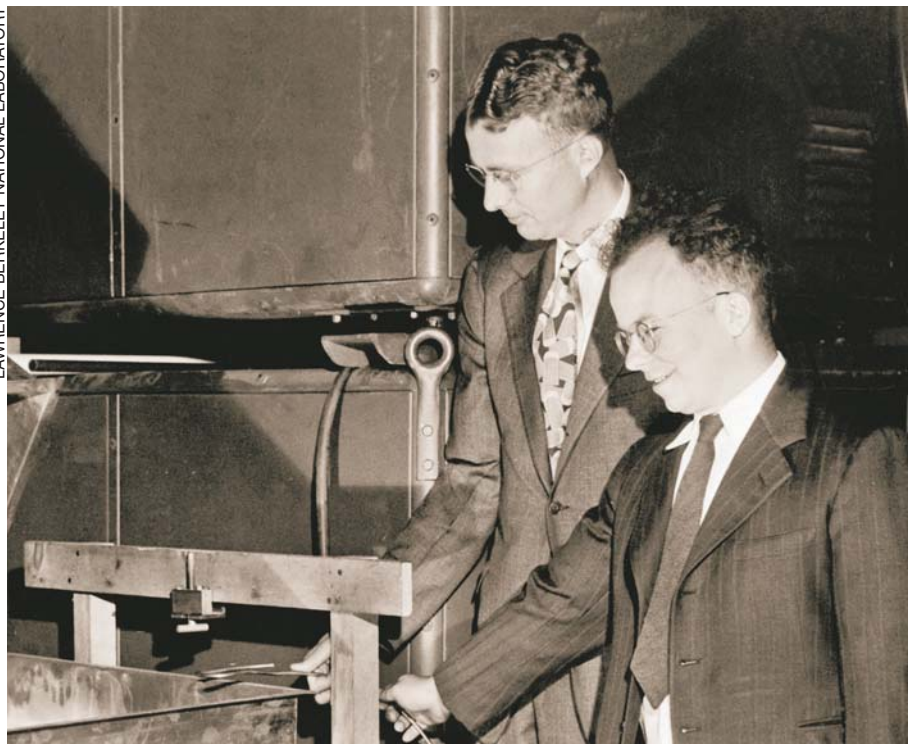
I have said many times that he is the most promising young physicist I met in my five years of war research in three of the largest laboratories devoted to such work. So it has been most gratifying to me to find that during the past two years, all those with whom Dr. Panofsky has worked have come to hold him in the same high regard.

I think it is no exaggeration to say that Panofsky is an amazing person. He has the most thorough grasp of basic physics I have ever seen in a man of his years. He works quite difficult theoretical problems with no apparent effort. At the same time, he is completely at home in the laboratory, and is one of the best practical radio engineers I know. He had no contact with microwave radio during the war, but he is now giving a lecture course on the theoretical and practical aspects of that field. I am with him a good part of each day, and I haven't the slightest idea where he finds the time to learn what he teaches.

Alvarez goes on to describe Pief's work on the linac and his increasing knowledge of nuclear physics. He extols Pief's sunny personality and his even temperament. Birge, for his part, observes that when Pief was appointed, the department had no knowledge of his ability in the classroom. Birge's letter then reads:

It is now, therefore, a real pleasure to record that his record in these latter fields has surpassed our fondest expectations! . . . He is now teaching Physics 210AB, our required graduate course in electricity and magnetism. [That course was surely the precursor of the well-known graduate text by Panofsky and Melba Phillips.] . . . He not only has the knowledge necessary for a great teacher, but he has the ability to present it clearly, and the same enthusiasm for teaching that he displays in everything else.

Pief was obviously viewed as a precious resource in the Berke-



Luis Alvarez (left) and Wolfgang Panofsky in 1946 at the Radiation Laboratory in Berkeley, California, holding a coupling loop that transferred power to a 200-MHz resonant cavity.

ley physics department and at the Rad Lab. He was promoted to associate professor with tenure, effective 1 July 1948.

In his years at Berkeley, Pief helped create Alvarez's 32-MeV proton linac. He also worked on the design of the gigantic materials testing accelerator (MTA), a prototype for an intense neutron source useful for making tritium for the nuclear weapons program.³ In his fundamental physics research, Pief and colleagues used three accelerators to do pioneering experiments. Notable were the photoproduction of the neutral pion with McMillan's electron synchrotron and several studies of the gamma rays from absorption of negative pions in hydrogen and deuterium at the 184-inch synchrocyclotron. That research provided crucial evidence on the properties of the pions and their interactions with nucleons. Pief appreciated the unusual opportunities at Lawrence's laboratory and envisioned a long and productive career there.

The cold war and loyalty oaths

Circumstances were to interfere. The eagerly anticipated peacetime after the end of World War II in 1945 had hardly begun when the cold war set in, with the Berlin blockade in 1948–49, Mao Zedong's victory over the Chinese nationalists, and the first Soviet atomic bomb in 1949. In the US, the disquieting signs from abroad translated into fear of communism and communist spies at home. The House Un-American Activities Committee (HUAC) became a permanent committee of the US House of Representatives in 1945. President Harry Truman instituted a loyalty program in 1947. The city of Los Angeles in 1948 created a mandatory loyalty oath with an "I am not now and never have been" clause, and people were fired. In Seattle, an investigation of possible communists at the University of Washington led to the dismissal of three employees in 1948. And the West Coast was not unique.

Closer to home, the regents of the University of California had in 1940 banned acknowledged communist teachers and in 1942 instituted the requirement for employees to

swear the oath of allegiance quoted from the state constitution. Prior to October 1950, this "positive" oath read as follows: "I do solemnly swear (or affirm, as the case may be) that I will support the Constitution of the United States and the Constitution of the State of California, and that I will faithfully discharge the duties of my office according to the best of my ability."

But in spring 1949, various proposals surfaced in the state legislature to add an anticommunist and antisubversion clause to the state's oath of allegiance, applicable to all state employees. In a supposedly preemptive action, UC president Sproul proposed and the regents agreed that UC employees, including faculty, be required to swear to an additional oath stating that they were not members of the Communist Party.⁴ By August half the faculty had signed, but influential opposition developed. The 1 October deadline was postponed to 30 April 1950 and then to 30 June. There were consultations between the regents and the faculty in the fall and winter. The northern and southern sections of the university-wide academic senate passed resolutions supporting the ban on communists. But they asked that employees be required to affirm only the state oath of allegiance.

Meantime in September 1949, HUAC commenced a hearing on alleged communist infiltration of the Rad Lab, where classified research was still being done. By December the regents held a hearing and fired a Berkeley physics teaching assistant who had been called before HUAC and was suspected of being a communist. Drumbeats were also heard off-stage. In February 1950 Senator Joseph McCarthy made his controversial speech in Wheeling, West Virginia, on communists and spies in the US State Department.

In the first half of 1950, faculty opposition hardened. Nonsigners organized formally. The sections of the academic senate continued to protest in various ways. The regents began to believe that the issue was less the oath and more a question of who governs the university. At the regents meeting of 21 April, nine days before the 30 April deadline, a committee of prominent alumni appointed by Sproul presented a compromise proposal, the result of consultations with the faculty and administration. The compromise gave nonsigners the option of a hearing before academic senate committees to present their reasons for not signing the oath. The committees would then make recommendations for retention or dismissal through the president to the regents for final decision. Implicit was the possibility that a nonsigner could be retained if the reasons for not signing were deemed justifiable. This proposal was apparently accepted by the regents, although one of them, John Francis Neylan, did not like the compromise.⁴

An additional UC oath, to be part of an *annual* contract

of employment, was formally approved by the regents at their April 1950 meeting. It read as follows:

Having taken the constitutional oath of the office required by the State of California, I hereby formally acknowledge my acceptance of the position and salary named, and also state that I am not a member of the Communist Party or any other organization which advocates the overthrow of the Government by force or violence, and that I have no commitments in conflict with my responsibilities with respect to impartial scholarship and free pursuit of truth. I understand that the foregoing statement is a condition of my employment and a consideration of payment of my salary.

Berkeley faculty, not least members of the physics department, were caught up in the controversy. Hard-line anticommunists had no problem with the oath. Pragmatic faculty members argued that however one felt about the appropriateness or efficacy of the oath, signing was best for the university and faculty in the long run. Nonsigners maintained that their rights of tenure and academic freedom, never mind their constitutional rights, were being violated. The new annual contract of employment with its associated notarized oath was the death knell of tenure.

Panofsky will stay, unless . . .

In spring 1950, eastern universities, aware of the turmoil at Berkeley, were trolling for prime prospects. Pief received offers from Columbia and Harvard. He turned them both down, electing tentatively to stay and weather the storm. Letters between Pief and his parents reveal some of the anxiety and doubt. On 25 March Erwin Panofsky wrote in part:

Dear Geierlamm⁵ and Adèle,

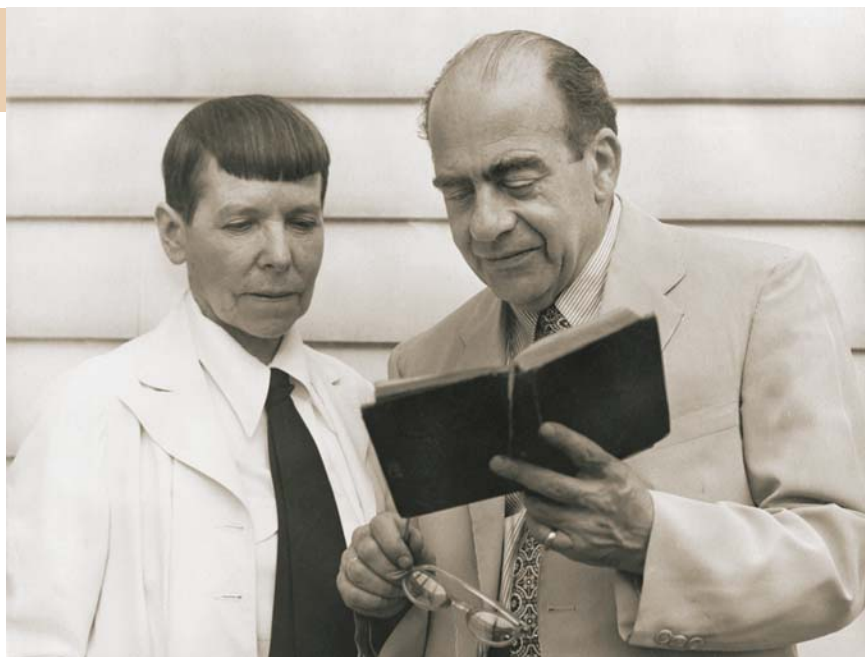
Lots of thanks for your nice letter. . . . I was very much interested in the report about your damned university. I am indirectly involved also through my friendship with old [Paul] Radin and Harold Cherniss. . . . Have you seen the cartoon of two scientists, chained to their laboratory tables, in the current *New Yorker*?

Yours as ever, Pappi⁶

Sometime in June, Pief wrote his parents:

Dear Jakob⁷ & Pappi,

We are very happy that you are not too mad at my decision [to turn down the offer from Columbia]. It has been a hard one and I am still not too sure that it has been right. One of the principal reasons for staying is the fact that I can function here . . . in the interests of pure physics. . . . Little is served if all people still interested in pure physics just get mad and leave. . . . I just could not see that I was



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solving anything by going to Columbia. . . . [But] if it is clear that the reactionary people will win here so that opposition is hopeless, I will certainly reconsider if possible. . . .

With best regards to you all, as ever, Wolf⁶

It seems clear from this letter that Pief must by now have signed the loyalty oath. He planned to stay unless things looked totally hopeless.

On 23 June 1950 the board of regents, led by Neylan, took the decisive vote to terminate 157 employees, both academic and nonacademic—although 62 other nonsigning faculty were retained. Ultimately, 31 faculty members were fired. In the Berkeley physics department that summer, instructor Howard Wilcox and assistant professor Geoffrey Chew resigned on principle, effective 30 June, and two non-signers—professor Gian-Carlo Wick and assistant professor Harold Lewis—were fired. At the Rad Lab, Jack Steinberger, with whom Pief collaborated on the two-photon decay of the neutral pion, left after one year.⁸ By the following summer, two more faculty members—Panofsky and Robert Serber—had resigned, making a total of six departures in the physics department (including all four of the department's theorists) because of the loyalty oath.

Visit to a regent

Pief's nuanced attitude, as seen from his letters, was "wait and see." After 23 June he had seen enough. Even though he had signed the oath, he now informed Lawrence and Alvarez that he intended to leave Berkeley. Lawrence, obviously dismayed at the prospect of losing his young star, used his friendship with regent Neylan to arrange an out-of-channels meeting at Neylan's home so that the 31-year-old Pief could hear the regents' side of the story before making his final decision. Neylan did all the talking; Pief was unmoved.¹

On 22 July Pief wrote a long letter to his parents about his mother's birthday and family plans, together with ruminations on the loyalty oath and the state of the world, perhaps before his meeting with Neylan:

The main reason I declined the two eastern jobs is simply that I am too involved with my experi-

ments here. I got five articles this year in the 'Physical Review' and am just writing a sixth. At the same time all the arguments for leaving in regard to the politics here are strong, but I always came to the sad conclusion that one is not fighting the University of California but the present politics in general, which is terribly discouraging. I just cannot understand why Truman & Co. don't understand that rearming, although perhaps necessary now as a consequence of former mistakes, cannot be the final answer to anything. [The Korean War had begun on 25 June.] . . . We hope to hear from you and about your summer plans.

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Adèle and Wolfgang Panofsky flank their three children and two nieces in front of their 1931 V-12 Cadillac in the fall of 1950.



Till then as ever yours, Geierlamm⁶

This letter, with its sense of excitement about his research, together with the implication that resignation is a meaningless gesture, elicited a sharp response on 3 August from his mother and father. His mother begins:

Your letter, dear Wolf, shows, I am sorry to say, that you have misunderstood completely the main issue. . . . It seems that physicists are even greater cowards than the humanists. We hear that [Ernst] Kantorowitz has not signed and possibly goes away, though he could stay, and even Walter Horn who is not going to get so easily a job has not signed, and Hans writes of one of his friends who will go away. The tragedy of the physicists seems to be that they are bound to their mashines [sic] as Ixion on his wheele [sic] (I hope you know who he is) and thus 'conscience does make cowards of them all.' But it can't be helped.

The letter then continues in his father's hand:

Dear Wolf,

. . . I only want to object to your specious logic that you cannot fight all Fascism by fighting California University. Of course not. But neither can you fight Evil in general by trying to prevent—or at least by not participating in—a murder at which you happen to be present. In other words, if an individual is confronted with a definite situation in which he can choose between two courses of action, he should decide for the right course as a matter of principle. It may or may not help the right cause in general, but this is not the point. I grant that [Dwight D.] Eisenhower [then president of Columbia] is probably no better than Sproul, and possibly [I. I.] Rabi no better than Lawrence. But speaking concretely, Columbia has as yet not taken any steps to force such a

decision upon its (or is it hers?) instructors while Berkeley has. And this is the point.

With all good wishes, Yours as ever, Pappi⁶

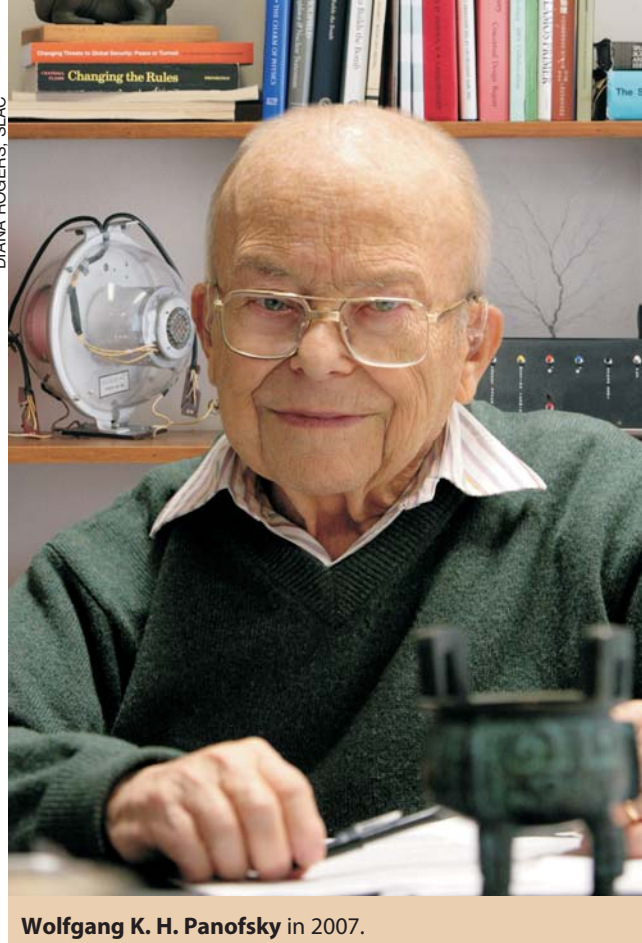
The black-and-white viewpoint of this letter can perhaps be understood from the parents' experiences and worldview. Persecuted by the Nazis and forced to leave Germany, they were rightly suspicious of the loyalty oath as a cold war demand for conformity or worse, inimical to the freedoms necessary at any institution of higher learning. Dorothea voices a common stereotype of scientists, and physicists in particular. Erwin's view is that the individual must act on moral principles, without regard to effectiveness in the larger realm. But both parents express concern and sympathy for old friends and colleagues making very difficult personal decisions.

A firm decision

During August, gossip and rumors spread through academia. In a close vote in July, the regents had reaffirmed their earlier acceptance of Sproul's recommendations based on the April compromise. Now a month later, on Neylan's initiative, they repudiated the compromise. After his meeting with Neylan, Pief went from wrestling with his conscience to a firm decision to resign. But garbled news of that meeting and its outcome had spread to the East Coast. Erwin, steeped in academic tradition, was particularly dismayed by a report that his son had gone, perhaps hat in hand, to see one of the regents rather than the university president. His letter of 18 September conveyed his anguish:

Dear Geierlamm,

I hate to interfere further with a decision which, in the last analysis, must be yours. But I feel obliged to call your attention to one aspect of the situation which was brought home to me today at our Faculty luncheon. . . . Someone mentioned, as an instance of the situation now prevailing in Berkeley, your personal case. As you probably know, it is absolutely taboo in academic life that a Trustee discusses faculty status, conditions of staying on, etc., with individual professors. So it



Wolfgang K. H. Panofsky in 2007.

was said, as an instance of the dire pass to which things has come at Berkeley, that you, upon receipt of an attractive offer, had 'gone to Mr. Neylan' instead of the President to talk it over. From what Hans and [Ludwig] Edelstein [a nonsigner] told me, the thing was exactly the other way round, that is to say, you had been invited, through Lawrence, to lunch with Neylan, and I said that much in order to defend whatever of family honor remains. Why you accepted this invitation is beyond me anyway, since from all I hear Neylan is the chief villain in the piece. . . . But what is now, I feel, imperative is that you do not, under any account, accept a continuance of your appointment at Berkeley. If you did so, you would be considered as one who had allowed himself to be bribed by about the worst enemy of academic freedom in the whole United States. . . . In sum: I feel that you probably should not have signed in the first place; that you did wonderfully well in resigning after it became apparent (which was clear to me from the start) that the so-called compromise was a phoney; that you should not have established personal contact with Neylan; but, since all this is now beyond repair, you cannot possibly consent to stay after that interview.

. . . I am prepared to share my last piece of bread with you and your expanding family; but I simply should not know, now, how to face my friends if you were to accept the bribe proffered by Neylan.

With love and all good wishes, Yours, Pappi⁶

Faced with this letter from his parents, Pief, made a firm but

measured reply on 23 September to set the record straight:

Dear Pappi & Jakob,

I am sorry to say that I am greatly disturbed by Pappi's letter in several respects. Firstly the way it reflects the general distortion of facts as they are being transmitted from West to East. Secondly, and still more seriously to me, it shows your interpretation of these things which you have apparently reached, namely, that a 'bribe' has been offered to me by Mr. Neylan in exchange for continuing at Berkeley. It seems to me that, before accusing me of such a thing, you could have written to find out the facts.

The facts are as follows: after I told the Physics department and the Radiation Laboratory that I was considering resigning because of the Regents' action, Lawrence said in effect: 'don't do anything till you hear the Regents' side'. I could not see any objection to this—I was not acquainted with the taboo of Regent-faculty communication. So I said 'all right' and Lawrence arranged for the meeting at Neylan's place. The interview was very simple: Neylan asked me what I was mad about and I told him that I was objecting to the Regents' intolerance in this matter. So Neylan said: 'Now listen, my boy' (He is 70) and talked for 2 hours straight about his views of the oath and its history. Then we went home. I swear to you that not even a word was spoken about my status at the Berkeley faculty. . . . Looking backwards now, I realize that I could be accused with possible justification of being a fool, but not of taking bribes or by-passing academic procedure. You may not know this, but the greatest villain in the oath story has been the President [Sproul].

The letter continues with a long discussion of mistakes and worse made by all sides—Sproul, regents, and faculty.

As to my personal case—I have promised to teach one term and am hunting for another job which I like. I have rejected Columbia for personal reasons. . . .

Dear Pappi, I think right now there is enough unhappiness in the world beyond our control without accusing one another of dishonorable things which we have not done.

With best regards, Wolf⁶

Adèle continued the letter on a happier note with family news, including mention of a recent purchase of a vintage 1931 Cadillac, to the delight of the children.

On 27 September Erwin replied in a relieved but still fatherly tone:

Dear Geierlamm,

Many thanks for your long letter which clarifies everything and permits me to rectify the widespread rumors. I do not quite see why you feel that I was 'accusing' you of having been—or considering to be—bribed by Mr. Neylan. What I was trying to tell you, and am still glad of having told you, is that you would be accused of having been bribed in case you were to change your decision to leave Berkeley and withdraw your resignation. . . .

As to the merits of the case as it is, I am enormously proud of your attitude. But if you look at it, for a moment, from the outside, I still believe that the story, as it was told to me, was the inevitable result of your agreeing to see Neylan. . . .

At any rate, both Jacob [sic] and I are now completely satisfied and very happy, and we have already informed the misinformed as to the true situation. . . . So, please, forgive me for my doubts as I forgive you for leaving it to rumor to keep us informed of what you were doing.

With all good wishes to you and your family,

Yours as ever, Pappi⁶

Pief evidently chose not to respond. He moved on.

Stanford

Once Pief's decision to leave Berkeley became widely known, more job offers began to arrive. Across the bay, Stanford University, small and not known for high academic standards before World War II, had embarked on a serious plan of expansion of its sciences and engineering departments with world-class faculty. Leonard Schiff and Felix Bloch from the physics department visited Berkeley to persuade Pief to come to Stanford. Although he knew little about Stanford, Pief was attracted by the 1-GeV electron linac under construction there. Beyond that, he and his family were fond of northern California. So a short move appealed to them. After weighing his various offers, Pief made his decision and informed his parents in a letter dated 19 November 1950:

Dear family!

We realize that our long silence regarding my future plans caused you to worry that the influences of Berkeley have overcome my earlier decision to resign. Actually this is not so; the one and only reason for my silence was the fact that I had several offers and had not made up my mind what to do, that is which to accept. I thought that, with the excess of rumors concerning me, I at least remain silent until I had made a final decision. Well, this I have done: I have accepted a professorship (full!) at Stanford University, a small private University on the West Coast. Most people think I am crazy to refuse Harvard, Rochester, Columbia and Birmingham for this but I think actually my decision was fairly rational. Stanford is building a machine of great interest to me (and I hope to Physics) namely a linear accelerator for high energy electrons. . . . I am staying here till June 30, principally at the strong request of Prof. Birge, the department chairman, whom I hate to hurt since the entire mess here is certainly not his fault.

. . . We are really terribly unhappy that you felt that you had lost our confidence. The answer is that I felt that with all these pressures acting on me I had to act for myself before causing any more confusion.

I think in my new position we will lead a considerably calmer life with certainly a considerable loss in productivity at least for a while. A physicist is really in a terrible position at this time [the start of hydrogen bomb development]. . . . Many people at Berkeley are criticizing me for letting the oath and the associated mess interfere with my responsibilities; I can only say that one's principal duty as a physicist or any other human

being is to maintain a certain minimum self-respect; . . . I feel I have the right to react in accordance with my own degree of sensitivity. Anyhow, these are the plans, crazy or not.

Adèle continued:

You wondered how I have felt about Pief's resignation from Berkeley. I am very glad that he has resigned, for things here have been getting more and more unpleasant. Not only the loyalty oath but also the administration of the Radiation Lab (just between you and us); and also this latest rumor concerning Pief and Neylan. For a while we were having a crisis about once every two weeks. . . . I think we will be quite happy in Stanford and I'm sure life will be much less hectic there than it has been here for Pief.

With Greetings and best wishes from us all.

Love, Adèle and [and in Pief's hand] Geierlamm⁶

On 2 January 1951 Pief wrote a short letter to Birge, resigning effective 30 June. It concluded with a warm sentence: "I should like to say here only that one of the things I regret most is to leave a department which, under your guidance, has treated me in such a friendly and generous manner."²

With that finale, Pief could focus on the future. His letters clearly show that he was happy with his situation in Berkeley, both in the physics department and at the Rad Lab. His future was assured there, but the loyalty oath and subsequent hardening of the regents' positions made staying untenable. For him the regrettable but right decision was to leave, with obvious discomfort at parting from the university and people like Alvarez, Birge, and Lawrence, who had treated him so well. His choice of Stanford over more prestigious institutions reflected his belief in his own ability to achieve success wherever he found himself.

In July the Panofsky family moved across the bay. The die had been cast eight or nine months earlier. The "plans, crazy or not," were under way. Crazy, thought Alvarez. Adèle has recounted to me Alvarez's reaction when he heard of Pief's decision:

Even in 1950 Stanford was still 'down on the farm,' and when Pief told Louie [sic] Alvarez he had accepted Stanford's offer, Louie said, 'Oh Pief you'll fade away at Stanford, nothing goes on there, you'll never be able to do any significant research!' . . . So Louie was proven wrong, and even some years later his big bubble chamber detector was moved from Berkeley to SLAC, where Joe Ballam and others did significant research with it.

At Stanford, Pief made his mark—in physics research and teaching, and more broadly in world affairs. Initially working in the Microwave Laboratory, he became director of HEPL [the High Energy Physics Laboratory]. Then in 1961 he founded SLAC and served as its director until 1984. Three Nobel physics prizes attest to, but do not delimit, the many important discoveries in particle physics made under Pief's aegis.

On the national and world scene, his pragmatic and evenhanded approach enabled him to work tirelessly and effectively for rational policies on nuclear armament and disarmament and on international cooperation in science. Those activities are described with candor in his memoir.¹ He was honored by governments, academies, professional societies, and universities and became a revered wise old man of physics. Pief's move to "a small private University on the

West Coast” was Berkeley’s loss and Stanford’s gain.

Wolfgang Kurt Hermann Panofsky died at the age of 88 on 24 September 2007.

Loyalty oaths, then and now

After the trauma of 1949–51, the loyalty oath moved to the courts. In October 1952 the oath was ruled unconstitutional by the state Supreme Court. The regents were ordered to reinstate all dismissed faculty. A few returned, but it was many years before the stain largely faded away. All university employees (except noncitizens) now have to swear an oath as a condition of employment—but not annually. At present the required oath is the first paragraph of the California oath of allegiance:

I do solemnly swear (or affirm) that I will support and defend the Constitution of the United States and the Constitution of the State of California against all enemies, foreign and domestic; that I will bear true faith and allegiance to the Constitution of the United States and the Constitution of the State of California; that I take this obligation freely, without any mental reservation or purpose of evasion; and that I will well and faithfully discharge the duties upon which I am about to enter.⁹

Unlike the UC employment oath introduced in 1950, the present oath is largely affirmative, with only a hint of proscription of unacceptable allegiances.

The online version of this article provides a link to the longer, more fully documented original manuscript. I thank Adèle Panofsky for her recollections and gracious permission to use images from the family collection. I also thank the Panofsky children—Carol, Margaret, Ted, Steven, and especially Richard—for their thoughtful comments. I acknowledge Harrassowitz Verlag for permission to quote from the Erwin Panofsky correspondence. I thank Robert Cahn for careful readings and comments on successive drafts. My thanks also to Ian Jackson for setting this article in motion. This work was supported by the US Department of Energy under contract no. DE-AC02-05CH11231.

References and notes

1. W. K. H. Panofsky, *Panofsky on Physics, Politics, and Peace: Pief Remembers*, Springer, New York (2007).
2. R. T. Birge, *History of the Physics Department, University of California, Berkeley, 1868–1950*, Physics Dept., U. California, Berkeley (1970), vol. 5, ch. 18, pp. 26–35.
3. The code-named Materials Testing Accelerator was a classified project of the US nuclear weapons program. See <http://www.lbl.gov/Science-Articles/Research-Review/Magazine/1981>.
4. University of California History Digital Archives, “The Loyalty Oath Controversy, University of California, 1949–51,” http://sunsite.berkeley.edu/~ucallhist/archives_exhibits/loyaltyoath/.
5. *Geierlamm* was a nickname coined by inverting the German *Lämmergeier*, a species of vulture (*Geier*) that allegedly preys on lambs (*Lämmer*). Erwin is calling his son a vulture-eating lamb! (See the whimsical poem *Das Geierlamm* by Christian Morgenstern at http://de.wikisource.org/wiki/Das_Geierlamm.)
6. D. Wuttke, ed., *Erwin Panofsky Korrespondenz 1910 bis 1968*, vol. 3, Harrassowitz, Wiesbaden (2006).
7. “Jakob” was a nickname for Pief’s mother, Dorothea, after an aging but still winning racehorse named Jake, as Dorothea was viewed by her children.
8. J. Steinberger, *Learning About Particles: 50 Privileged Years*, Springer, New York (2004), p. 39.
9. Constitution of the State of California, article 20, section 3 (<http://www.leginfo.ca.gov/const.html>). The California Oath of Allegiance in the state constitution consists of two paragraphs. In 1967 the state Supreme Court ruled the second paragraph unconstitutional (as a condition of employment or public office) under the US Constitution on the basis of earlier federal-court decisions. ■