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Panofsky Agonistes: 1950 Loyalty Oath at Berkeley; Pief navigates the crisis.

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In 1949-1951 the University of California was traumatized and seriously damaged by a Loyalty Oath controversy. Wolfgang K. H. Panofsky, a young and promising physics professor and researcher at Lawrence's Radiation Laboratory, was caught up in the turmoil.

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Beginnings

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 of art history. From 1933 Jews at German universities came under threat from Nazism. Dismissed from his university position in 1934, Erwin seized the opportunity to accept a dual visiting appointment at New York University and Princeton (and a year later, a permanent position at the then new Institute for Advanced Study) and to settle his family in Princeton. At age 15 Wolfgang and his slightly older brother Hans entered Princeton, under-age Wolfgang initially on probation. Pief, as he was named by his fellow undergraduates who could not cope with Wolfgang, excelled in his studies and graduated in 1938 "with highest honors." [1]

At age 19 Pief then moved to Cal Tech for graduate work in physics. A teaching assistant with a heavy teaching load, he began research on x-rays with Jesse W. M. DuMond. He completed his Ph.D. in 1942, having built on his Princeton experience in the laboratory to become an electronics expert able to manage complex experiments. Upon graduation he married Adele DuMond and stayed on at Cal Tech, teaching evening classes to military personnel and doing classified war research under DuMond on acoustic devices to measure the proximity of bullets to the target. Some of this work came to the attention of Luis Alvarez, who co-opted Pief as a consultant to the Manhattan Project at Los Alamos. He developed shock wave calibrators for Alvarez that were used to measure the yields of the Hiroshima and Nagasaki atomic bombs in 1945.

Commencing at 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 Lawrence's Radiation Laboratory in early 1946. In June 1946, Raymond T. Birge, Chair of the Berkeley Physics Department, recommended Pief for appointment on campus as an Assistant Professor (1/3 time) with the remainder paid by the Radiation Laboratory. Birge waxes enthusiastic in his letter to President Robert Gordon Sproul:[2]

> "Dr. Panofsky is, in our opinion, one of the most promising, if not the most promising young physicist of his age in the country. When a skeleton organization of the Radiation Laboratory was set up last Fall, Professor Alvarez suggested Dr. Panofsky as his first assistant in the linear accelerator program. The eight of us who were participating in the discussion immediately agreed with Professor Alvarez' choice, for Dr. Panofsky was well known to all of us. He was immediately called by long distance, in Pasadena, and hired within fifteen minutes of the time of our decision. The speed was necessary because he then had an attractive offer from an Eastern institution."

Birge continues in part:

> "In the three years following the attainment of the Ph.D. degree Dr. Panofsky held important scientific and administrative posts in war research at Pasadena, eventually becoming director of an entire large and important project.
>
> "You will recall that when Dr. Alvarez was appointed to the staff of the physics department, we stated that he was, in our opinion, the most promising young physicist in the country. His subsequent record has brilliantly fulfilled this prediction. Now Dr. Alvarez joins with us in making the same prediction about Dr. Panofsky, and I am writing at such length about him because I consider this an important event in the history of the department."

After just two years, Pief was promoted to Associate Professor. Birge's promotion package contained his own letter and supporting letters from Alvarez, Lawrence, and McMillan. In his history[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. This course is his own idea, as an incentive to learn a new subject, and is in addition to the heavy teaching and research load he carries."

Alvarez goes on to describe Pief's work on the linear accelerator and his increasing knowledge of nuclear physics. He extols Pief's sunny personality and even temperament as great virtues in a research environment. Alvarez ends with:

"In conclusion, I should say that the hardest part of writing this letter has been to tone down my enthusiasm to the point where another reader might believe that I was talking of a real person."

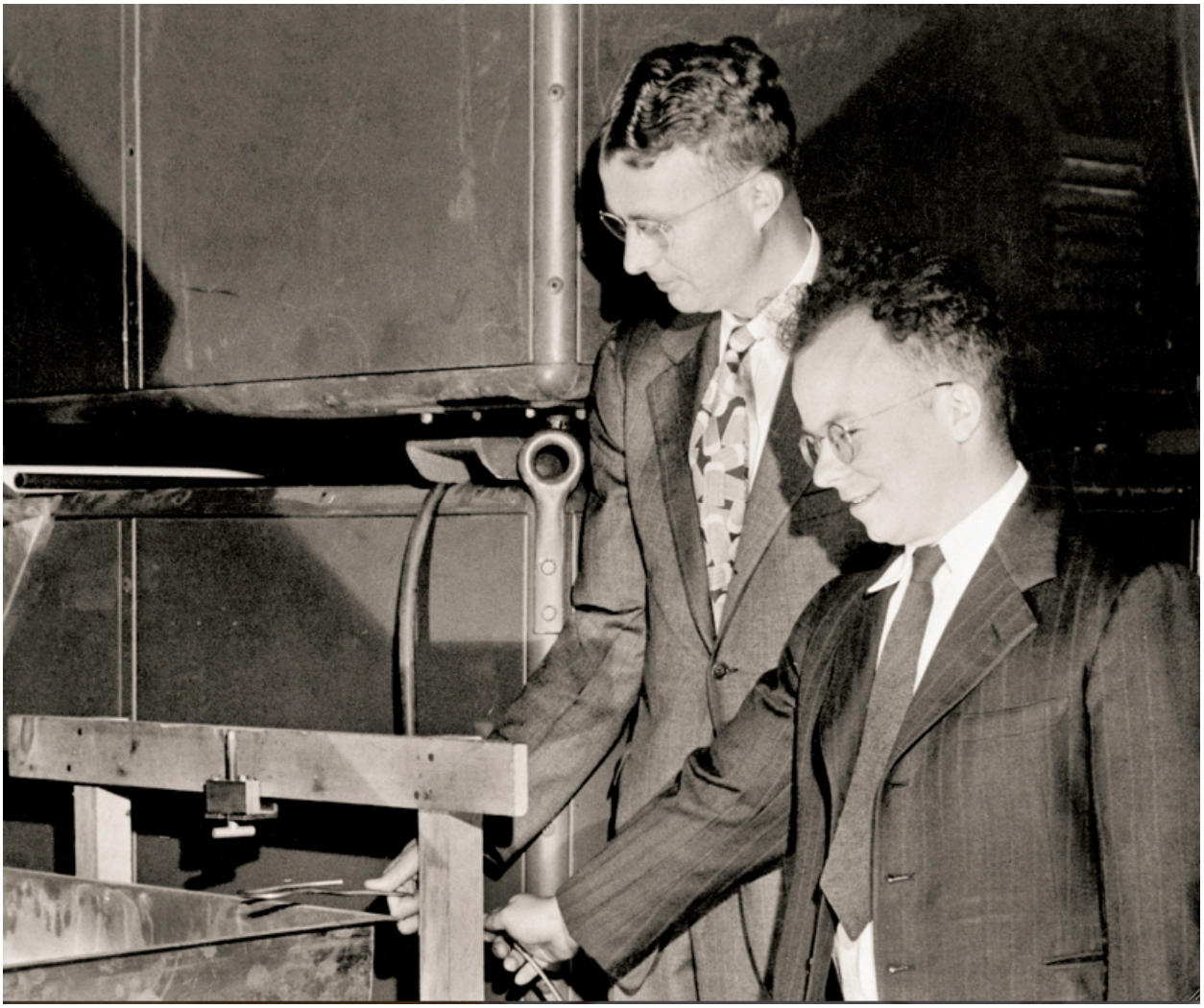

Figure 1. Luis Alvarez and Panofsky holding a coupling loop transferring power to a 200-Megahertz resonant cavity, 1946. (Credit: Lawrence Berkeley National Laboratory)

For his part, Birge observes that when Pief was appointed the department had no first-hand knowledge of his inclination and ability in the classroom or in other necessary departmental business. 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! Last year (1946-47) Dr. Panofsky was on only one-third time in the department and taught only one course. This year he is on two-thirds time. He is now teaching Physics 210AB, our required graduate course in electricity and magnetism.[This course was surely the precursor of the well-known graduate text by Panofsky and Melba Phillips.] He is also in charge of Physics 110CD, the upper division electrical laboratory . . .

> "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 Berkeley physics department and at the Radiation Laboratory. He was promoted to Associate Professor with tenure, effective July 1, 1948.

Pure and "applied" research

In his years in Berkeley, Pief helped create Alvarez's 32 MeV proton linear accelerator and also worked on the design of the gigantic materials testing accelerator (MTA),[3] a prototype for an intense neutron source useful for making tritium for the weapons program. In his fundamental physics research, he and his colleagues utilized three accelerators - the proton linac, the 184" synchrocyclotron with its 350 MeV proton beam, and McMillan's 300 MeV electron synchrotron - to do pioneering experiments. Notable were the photoproduction of the neutral pion with the electron synchrotron and several studies of the gamma rays from negative pion absorption in hydrogen and deuterium at the 184" synchrocyclotron. These researches 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 the Second World War in 1945 had hardly begun when the Cold War set in, with the Berlin Blockade in 1948-49, Mao's victory over the Chinese nationalists, and the first Soviet atomic bomb in 1949. As early as 1946, George Kennan and Winston Churchill in different ways sounded the call against Stalin's expansionism. In the US, the disquieting signs from abroad translated into fear of communism and potential communist spies at home. The House Un-American Activities Committee (HUAC) became a permanent committee 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 in addition to positive affirmations to defend the constitutions of state and country and people were fired; in Seattle, an investigation of possible communists at the University of Washington by a state un-American activities committee 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 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 anti-communist and anti-subversion clause to the State's Oath of Allegiance, applicable to all state employees. In a supposedly preemptive action, UC President Sproul proposed that UC employees, including faculty, be required to swear to a new oath stating that they were not members of the Communist Party.[4] The Regents accepted Sproul's proposal. As word got out, influential groups of faculty mounted opposition. Sproul ordered faculty to sign the new oath by October 1; by the end of August roughly half had signed. Many Regents felt that the Academic Senate Advisory Committee had been "on board," but in the Fall the Regents appointed a committee to confer with the faculty. These consultations resulted in the oath deadline being deferred first until April 30, 1950, and then to the end of the 1949-50 academic year. Meetings of the Northern and Southern Sections of the Academic Senate resulted in resolutions supporting the ban on Communists in the University, but asking that employees be required to affirm only the State Oath of Allegiance.

Meantime, in September HUAC commenced a hearing on alleged Communist infiltration of the Radiation Laboratory, 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. Drum beats were also heard off-stage. In February 1950, Senator Joseph McCarthy made his controversial speech in Wheeling, West Virginia, claiming to have a list of members of the Communist Party and members of a spy ring employed by the US State Department.

In the first half of 1950 faculty opposition hardened. Non-signers organized formally; the Academic Senate Sections continued to protest in various ways. On their part the Regents began to believe that the issue was less the oath and more the issue of who governs the University. At their meeting of April 21, nine days before the deadline of April 30, a committee of prominent alumni, appointed by President Sproul, presented a compromise proposal, the result of consultations with the administration and faculty. The compromise gave non-signers the option of a hearing before the Academic Senate's Committees on Privilege and Tenure to present their reasons for not signing the oath. The P & T committee would then make recommendations for retention or dismissal through the President to the Regents for final decision. Implicit was the possibility that a non-signer could be retained if the reasons for not signing were deemed justifiable. This proposal was apparently accepted by the Regents, although Regent John Francis Neylan did not like the compromise.[4]

The additional UC oath, to be part of an annual contract of employment, was formally approved by the Regents at its 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-liners had no problem with the oath; pragmatic faculty 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. Non-signers maintained that their rights of tenure and academic freedom, if not their constitutional rights, were being violated. The new annual contact of employment with its associated notarized oath was the death knell of tenure.

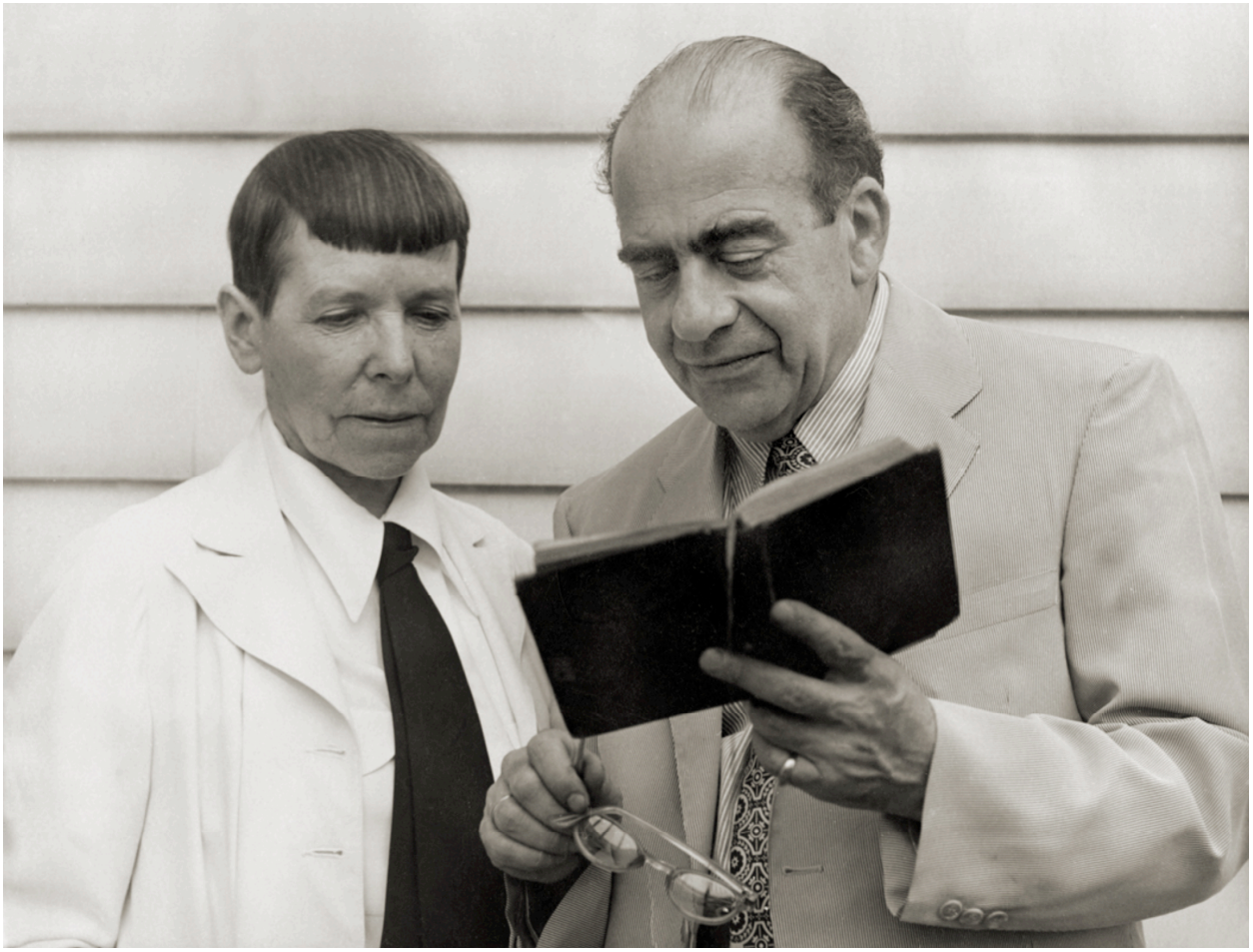

Figure 2. Dorothea and Erwin Panofsky, 1903s (Credit: Panofsky Family Collection)

June deadline approaches: Panofsky is staying, unless

In Spring 1950 Eastern universities, aware of the turmoil at Berkeley, were trolling for prime prospects. Pief received inquiries from Columbia and Harvard, with aggressive pursuit by Columbia. He turned down both offers, electing tentatively to stay and weather the storm. Letters between Pief and his parents reveal some of the anxiety and doubt. On March 25, Erwin Panofsky writes in part (1358)[5, 6]:

"Dear Geierlamm[7] 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, the classicist here whom we called from Berkeley, and sent a wire of sympathy to a man named Davisson (on Roy Sessions' suggestion). Have you seen the cartoon of two scientists, chained to their laboratory tables, in the current *New Yorker*? Not very well drawn, but a nice idea, the presumption being that only the F.B.(I.) can open the locks when they must go to the bathroom or have some sleep. …..
Yours as ever, Pappi."

Sometime in June, perhaps after further exchanges not in Ref. 5, Pief writes his parents (1366):

"Dear Jakob[8] & 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 as sort of "loyal apparitor" in the interests of pure physics. This , as Oppi[9] will admit, is one of the most excellent physics laboratories and little is served if all people still interested in pure physics just get mad and leave. I have been reasonably successful in getting Lawrence's commitment to the extent that I can do what I want to do and also to make him understand my feeling about "normal" vs. "applied" physics. …. I just could not see that I was solving anything by going to Columbia. . …. I felt that I could in either place behave according to my own convictions and not as somebody's "stooge." Still, whether this reasoning is right I do not know; if it is clear that the reactionary people will win here so that opposition is hopeless, I will certainly reconsider if possible. I think politically California is no worse than any other state ….. This being so I decided to let inertia and the weather decide and to stay. …..
With best regards to you all, as ever Wolf.
[*In Adèle Panofsky's hand*] Best wishes and love Adèle."

It seems clear from this letter that Pief must have by now signed the loyalty oath. His letter expresses a nuanced view that it does little good for everyone doing pure research to leave when staying may moderate the situation. He plans to stay unless things look totally hopeless.

On June 23, 1950 the Board of Regents, led by Neylan, took the decisive vote to terminate 157 employees, both academic and non-academic, although 62 further non-signing faculty were retained. The numbers of the latter changed as a result of some signings and Regental actions; ultimately 31 faculty were fired. In the Berkeley Physics Department that summer, Instructor Howard A. Wilcox and Assistant Professor Geoffrey F. Chew resigned on principle effective June 30 and two non-signers - Assistant Professor Harold W. Lewis and Professor Gian Carlo Wick - were fired. At the Radiation Laboratory, Jack Steinberger, with whom Pief collaborated on the two-photon decay of the neutral pion, left after one year.[10] By June 30, 1951 two more faculty - Panofsky and Professor Robert Serber - had resigned, making a total of six departures in the Physics Department (all four of the department's theorists) because of the loyalty oath.

The visit to Regent Neylan

Panofsky's nuanced attitude, as seen from his letters, was "wait and see." After June 23, he had "seen." Even though he had signed the oath, he now informed Lawrence and Alvarez and others that he intended to leave the Radiation Laboratory.[11] 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 for the 31-year old Pief to hear the Regents' side of the story before making his final decision. The effectiveness of this meeting is best summarized by Birge, who writes in his history:[12]

> "After the disastrous action of the Board on the Loyalty Oath, and when Dr. Panofsky was debating with himself whether to resign, Lawrence took Panofsky to Neylan's house, to dinner, to give Neylan the opportunity to try to persuade Panofsky to remain at Berkeley (with promises of financial support, etc.). This action of Lawrence shows how ignorant he then was of the true situation. For if there was anyone at the time for whom Panofsky felt utter disdain it was Neylan. Obviously nothing was accomplished by that visit."

On July 22, 1950 Pief wrote a long letter (1380) to his parents about his mother's birthday and family plans (not coming East, the children's progress), 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 experiments 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 June 25, 1950.] In particular they seem not to be interested in the slightest to present a reasonably good case to the outside world. ….
>
> "I wish that there was something vaguely constructive one could do about the world. One feels that just doing pure physics is still fun and exciting but clearly not what is needed. Also if I could think of some fairly clever defensive physics, that might help. It seems that technology of offense is in so much better shape than technology of defense that even that is discouraging.
>
> We hope to hear from you and about your summer plans. Till then as ever yours, Geierlamm."

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 August 3 from his mother and father (1385). His mother begins:

"Dear children,
…… 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 and that Rabi himself comes out of his free will to your incredible University seems quite phantastic.

"Our attitude to the war is, too, not the same as yours. But in all these questions nobody can convince another person."

The letter then continues in his father's hand:

"Dear Wolf, I am taking over here because the war is, as Fontane says, 'ein weites Feld.' 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 <u>individual</u> is confronted with a <u>definite situation</u> 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 Eisenhower [then President of Columbia] is probably no better than Sproul, and possibly 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 <u>is</u> the point.
With all good wishes, Yours as ever, Pappi."

The black and white viewpoint of this August 3 letter can perhaps be understood from the Panofskys' experiences and world view. 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. Dora voices a common stereotype of scientists, and physicists in particular, as narrowly focused, eyes and minds only on their research. The elder Panofskys' view is that in such dire circumstances the individual must decide his or her course of action on moral principles, without regard to its effectiveness in the larger realm. But they do express concern and sympathy for old friends and colleagues making very difficult personal decisions to stay or leave.

August and September: Decision to leave

During August, gossip and rumors spread through academia. The Regents, after reaffirming in July their June acceptance of Sproul's recommendations according to the April compromise (but only by a vote of 10/9), repudiated the compromise in August, thanks to Neylan's initiative. Pief had by then gone from wrestling with his conscience but tentatively deciding to stay in June to a firm decision to resign after the Neylan interview. Garbled news of the circumstances of his meeting with Neylan and its outcome had spread to the East coast. Erwin Panofsky, steeped in strict academic traditions, was particularly dismayed by the report that his son had gone, hat in hand perhaps, to see one of the Regents and not the university President. His letter of September 18 (1389) conveys 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 (the Institute's) Faculty luncheon. We have passed a resolution urging the Berkeley Faculty to unite - now at least - to the defense of faculty rights against the Regents, and in the ensuing conversation 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 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 non-signer] 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 I will not pass judgement on this, all the more so as it is past history. 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. Whereas, if you stick to your resignation - which, needless to say, came as an enormous relief to both of us - you will continue to be regarded as a decent man. 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 <u>after</u> that interview.
>
> "In case your Columbia offer should have vanished in the meantime, 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.
>
> "Please forgive me for interfering, but things have come to a pass that I am affected personally, albeit indirectly.
> With love and all good wishes, Yours Pappi."

Pief, faced with these letters from his parents, especially the last, makes a firm but measured reply on September 23 to set the record straight (1393):[13]

> "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].
> . . . . . [Here the letter continues with a long discussion of mistakes and worse made by all sides - President, Regents, 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 Wolf."
>
> [The letter continues on a happier note with family news from Adèle Panofsky, including mention of a recent purchase of a vintage 1931 Cadillac, to the delight of the children.]

On September 27 Erwin replies in a relieved, but still "fatherly," tone (1396):

> "Dear Geierlamm,
> Many thanks for your long letter which clarifies everything and permits me to rectify the wide-spread 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 <u>would be</u> accused of having been bribed <u>in case</u> you were to change your decision to leave Berkeley and withdraw your resignation. . . . .

. Far from accusing you myself, I merely felt it my duty, and my right, to inform you of the consequences in an entirely hypothetical case which, thank God, has not become fact; but this I could not know since you had never informed me even of the fact of your resignation, let alone of the subsequent events. 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 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, Pappi."

Pief evidently chose not to respond. He moved on.

Figure 3. Adèle and Wolfgang Panofsky with their three children and two nieces, and the 1931 V-12 Cadillac, Fall 1950 (credit: Panofsky Family Collection)

Stanford

Once Pief's decision to leave Berkeley became widely known, job offers began to arrive. Across the Bay, Stanford University, small and not known for high academic standards before the war, had embarked immediately post-war on a serious plan of expansion of its sciences and engineering with world-class faculty. Leonard Schiff and Felix Bloch of the Stanford Physics Department came to Berkeley to persuade Pief to come to Stanford. Although Pief knew very little about Stanford, he was attracted by the 1 GeV electron linear accelerator under construction and its physics possibilities. He and his family also enjoyed Northern California and a short move appealed to all. After weighing his various offers, Pief made his decision and informed his parents in a letter dated November 19, 1950 (1412):

> "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.
>
> "Dear Jakob and Pappi - 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; this is strictly a personal matter; I cannot feel any sense of criticism of people who are more 'thick skinned' than I toward oaths and secrecy but I feel I have the right to react in accordance with my own degree of sensitivity.
>
> "Anyhow, these are the plans, crazy or not. . . . .

The letter is continued by Adèle:

> "Dear Jacob and Pappi,

Yes, I too am very glad that our future is finally decided, but I am sorry that it brings us no closer together physically for the time being. . . . .

"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*] Geierlamm"

On January 2, 1951 Pief wrote his short resignation letter to Birge[14]:

[Dear Professor Birge,]

"I should like to inform you that I have accepted a position at Stanford University for the coming academic year. Accordingly I am herewith submitting my resignation to the Department of Physics of the University of California [effective June 30, 1951].

"I believe it is not necessary here to state in detail the reasons contributing to my decision, the recent actions of the Regents certainly were among the determining factors. 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."

With this 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 Radiation Laboratory. His future was assured, but the loyalty oath and subsequent hardening of the Regental positions made remaining untenable. For him the regrettable but right decision was to leave, with obvious discomfort at parting ways with the University and the people (Alvarez, Birge, Lawrence) who had treated him so well. His decision for Stanford over more esteemed institutions reflected his belief in his own abilities to achieve success wherever he found himself.

In July 1951 the Panofsky family moved across the San Francisco Bay to Stanford. The die had been cast eight or nine months earlier. The "plans, crazy or not," were underway. His original mentor Alvarez thought, crazy. Adèle Panofsky recounts Alvarez's reaction when he heard of Pief's decision:[15]

"Even in 1950 Stanford was still 'down on the farm,' and when Pief told Louie 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 more than made his mark, locally in physics teaching and research and more broadly in world affairs. Initially working in the Microwave Laboratory, then as director of the

High Energy Physics Laboratory, he was the originator and first director of the Stanford Linear Accelerator Center from 1961 to 1984. Three Nobel prizes in Physics 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 even-handed approach enabled him to work tirelessly and effectively for rational policies on nuclear armament and disarmament and international cooperation in science. These activities are described with typical 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.

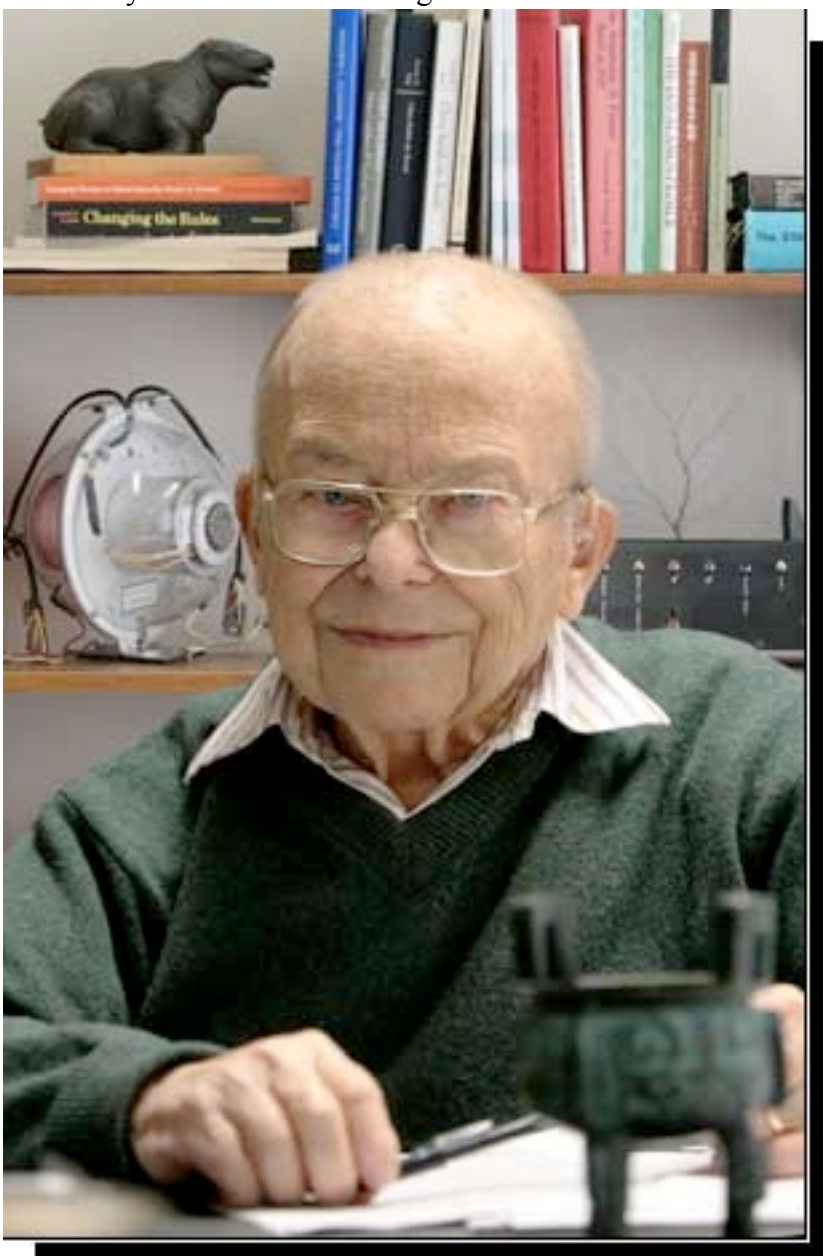

Figure 4. Wolfgang K. H. Panofsky, 2007 (Credit: SLAC)

Wolfgang K. H. Panofsky died at the age of 88 on September 24, 2007.

Afterword: Loyalty oaths, then and now

After the trauma of 1949-1951, the Loyaly 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. Some number returned, one in Physics at Berkeley, but it was many years before the stain largely faded away. All University employees (except aliens) do swear an oath as a condition of employment, but not annually. At present it is the first paragraph of the California Oath of Allegiance[16, 17] that reads as follows:

> 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.

Comparison with the oaths cited earlier shows that the present oath is largely affirmative, with only a hint of proscription of unacceptable allegiances.

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Footnotes

[1] Pief's delightful memoir, Wolfgang K. H. Panofsky, *Panofsky on Physics, Politics, and Peace*: *Pief Remembers*, Springer, New York (2007), may be consulted for rich detail on his whole professional life.

[2] Raymond T. Birge, *History of the Physics Department, University of California, Berkeley*, *1868-1950*, 5 vols., Department of Physics, University of California, Berkeley (1966, 1967, 1970), Vol. V, Chapter XVIII, p.26-35.

[3] The code-named materials testing accelerator was a classified project of the US nuclear weapons program. See *Lawrence and His Laboratory, A Historian's View of the Lawrence Years*, LBL Newsmagazine 1981, Chapter 5. Available on the Internet:
< http://www.lbl.gov/Science-Articles/Research-Review/Magazine/1981/index.html. >

[4] The timeline and much other material may be found in *The Loyalty Oath Controversy, University of California, 1949-1951,* < http://sunsite.berkeley.edu/~ucalhist/archives_exhibits/loyaltyoath/ >

[5] Dieter Wuttke, ed., *Erwin Panofsky Korrespondenz 1910 bis 1968,* Band III, *Erwin Panofsky Korrespondenz 1950 bis 1956*, Harrassowitz Verlag, Wiesbaden (2006)

[6] Numbers in parentheses refer to letters in Ref. 5.

[7] "Geierlamm" is a nickname made up by inverting the order of the German name, Lämmergeier, of a bearded vulture (Geier), a large predatory bird that allegedly preyed on lambs (Lamm). Adèle Panofsky thought that Erwin Panofsky had invented the nickname (private communication), but I have a different theory (confirmed by Dieter Wuttke). A whimsical poem, Das Geierlamm, by Christian Morgenstern (a German poet, 1871-1914) was surely known to Erwin Panofsky. The German text may be found at < http://de.wikisource.org/wiki/Das_Geierlamm > . A paraphrase in English is ~ The Lämmergeier is well known, the Geierlamm is not. The Geier is obvious, the Lamm is subtle. The Geierlamm does not say "bah" or "mah," but he eats you up if you go too near. Then he turns his eyes to Heaven and everyone adores him. ~ As a child Pief must have been a "hawk-eating lamb!"

[8] "Jakob" was a nickname in German for Dorothea Panofsky, derived from the English word Jake, the name of a race horse, aging but still winning, as Dorothea was viewed by her children. (private communication from Adèle Panofsky).

[9] J. Robert Oppenheimer moved from Berkeley to Princeton in 1947 to be Director of the Institute of Advanced Study and so available as a source of views on Berkeley for Erwin Panofsky.

[10] Steinberger had only a one-year appointment as an assistant to Wick, but the loyalty oath surely played some role in his decision, together with thwarted prospects. See Jack Steinberger, *Learning about Particles - 50 Privileged Years,* Springer (2003), p. 39-40.

[11] Ref. 1, p. 42.

[12] Ref. 2, Chapter XVIII, p. 33.

[13] For a brief retrospective version of the Neylan story, see Ref. 1, p. 42-43.

[14] Ref. 2, Chapter XVIII, p. 34.

[15] Adèle Panofsky, private communication.

[16] Constitution of the State of California, Article 20, section 3. < http://www.leginfo.ca.gov/const.html >

[17] The California Oath of Allegiance that appears in the constitution[16] consists of two paragraphs. The second paragraph was ruled unconstitutional under the U.S. Constitution by the judgement in *Vogel vs. County of Los Angeles (1967)* 68 Cal. 2d 18.

Figure captions

Figure 1. Luis Alvarez and Panofsky holding a coupling loop transferring power to a 200-Megahertz resonant cavity, 1946. (Credit: Lawrence Berkeley National Laboratory)

Figure 2. Dorothea and Erwin Panofsky, 1930's (Credit: Panofsky Family Collection)

Figure 3. Adèle and Wolfgang Panofsky with their three children and two nieces, and the 1931 V-12 Cadillac, Fall 1950 (Credit: Panofsky Family Collection)

Figure 4. Wolfgang K. H. Panofsky, 2007 (Credit: SLAC)

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